siniat

drywall manual

partitions section

Version **2.1.0**

Publication date: April 2023

etex inspiring ways of living

For ease of download, the Siniat Drywall Manual has been split into separate volumes with their own page numbering.

Partitions section

Revision history

Version	Date of publication
1.0.0	December 2018
1.0.1	July 2022: Rebranded, discontinued products removed, technical information not reviewed
2.0.0	April 2023: Technically reviewed and updated. New system naming and revised performances to provide EN and EXAP classification.
2.1.0	April 2023: Label correction p53

Please check that this is the current version by visiting the Siniat website. For archived versions please contact technical services.

Version: **2.1.0**
Published: **April 2023**

Technical services
technical@siniat@.co.uk

partitions systems

The Siniat range of metal stud profiles provides system solutions for most building projects. Combining the right Siniat plasterboard, fixings, frame and finishing products, gives partition solutions up to the most demanding levels of fire, acoustic and thermal performance.

Version: **2.1.0**
Published: **April 2023**

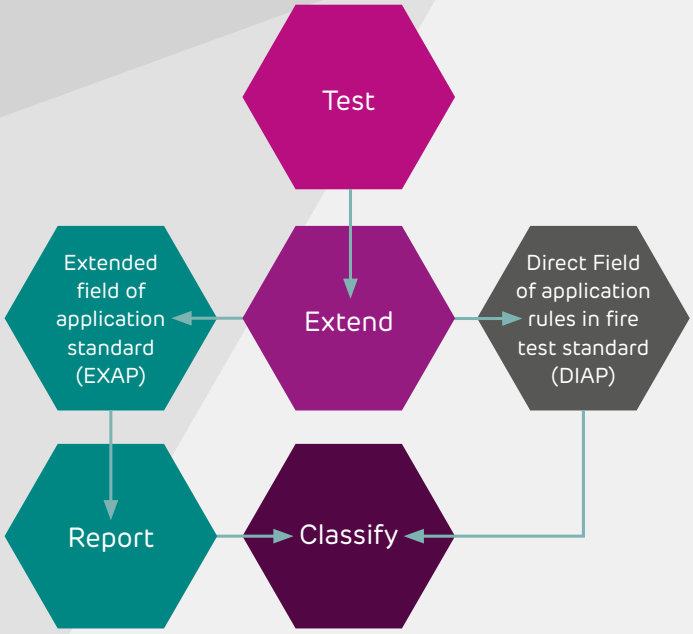
System performance tables

the right route **to compliance**

Siniat are committed to using the latest standards to reduce the level of risk in construction and meet increasingly stringent regulations. This approach helps ensure that drywall remains one of the safest parts of a building specification, offering 'built-in' fire resistance and reducing project risk.

The most recent changes to Approved Document B asks for testing to EN fire standards; that the results are only extended using appropriate EN standards, by qualified third parties; and that all fire resistance performances are 3rd Party classified using the official EN classification standard, EN 13501-2.

This process is now fully achievable for single frame partitions and partially available for twin frame systems. As a result this should be considered the default test evidence approach. Legacy standards or procedures, e.g. BS 476, should only be used when strictly necessary and justifiable, for example, in applications the latest standards do not yet cover.



How do Siniat fire test partitions?

A 3rd party UKAS Accredited notified laboratory conducts the test to the EN 1364-1 standard 'Fire resistance tests for non-loadbearing elements – Walls' Some historical tests to BS 476-22 'Methods for determination of the fire resistance of non-loadbearing elements of construction' also remain available.

How is a fire test extended?

By extending a fire test following strict EN standards, a single test can be used to substantiate many variations of the specific build-up.

Fire resistance performance can be extended via two approved routes:

- Using Direct Field of Application (DIAP) rules included in the fire test standard EN 1364-1
- Using Extended Field of Application (EXAP) standard EN 15254-3

Approved Document B states that to assess and extend a fire test, a relevant EXAP standard should be used. Therefore, test results for Siniat single metal frame partitions have been extended using the EXAP standard (EN 15254-3) and then classified.

As there is no EXAP standard covering twin frames at this time, we default to using the DIAP rules defined in EN 1364-1.

How is a partition system classified?

Approved Document B asks that fire resistance of building elements should be classified in accordance with EN 13501-2. All of our fire rated partition systems will have an accompanying 3rd party classification report. It will contain:

- Details of test build-up
- test results
- Fire classification
- System extensions allowed

Shift from BS to EN

Siniat have been testing to EN standards for many years – it is the most up to date testing approach and is now the default standard in Approved Document B. EN 1363/4 test methods are slightly more onerous than BS 476 due to differing temperature measurement methods, but the most significant difference between EN and BS standards is the treatment of fire-state height.

In EN methods the results do not necessarily apply above the typical 3m furnace size unless certain conditions are met. EN Fire state height was not considered in BS 476 and therefore has not traditionally formed part of the specification requirements of most UK construction. However, compliance with EN standards, as laid out by Approved Document B, means that Fire State height must be considered. This can slightly alter the system make-ups for taller walls, and places overall limits on height.

Despite this change in approach, in practice, the absolute limit on height is usually the mechanical, or 'cold-state' height, for single frame partitions.

Approved Document B does make allowance for legacy usage of BS 476, although this is proposed by government to be removed in the near future. In drywall, EXAP standards are available for conventional, single metal frame partitions so it is entirely possible to fully comply with EN standards for these systems.

For other partition types the limited availability of standards can place excessive limits on height, and therefore may require the legacy approach or supplementary evidence to achieve expected heights. Any deviation from EN standards should be agreed by the design or construction teams with the relevant building control body at design and construction stage.

Maximum Heights

There are two types of maximum heights for a partition.

- Cold state: Maximum height without a fire resistance classification
- Fire state: Maximum height to achieve a specific fire resistance classification.

What is EN fire state height?

The EN fire state heights stated in this manual are Approved Document B and EN Compliant. These values are the lower of the two states, fire and cold state.

The fire state height is calculated according to three acceptable methods: UK National Annex to EN 15254-3 (UK NA), EN 15254-3 (clause 6.4.1), and EN 1364-1 (DIAP).

The cold state is calculated using structural engineering methods to L/240 limits @ 200Pa or 0.2kN/m².

By agreement between the project's client, designers and appointed building control body it may be possible to design based only on mechanical 'cold state' maximum height.

All Siniat partition systems have been classified to EN 13501-2.

Our single frame partitions have also used the available EXAP standard (EN 15254-3) in order to extend results to a wider range.

performance tables **introduction**

How to read performance tables

Only a small range of our partition offering is displayed in this manual. A wider range can be found on our website or by contacting Siniat technical services.

Each system displayed includes:

- Build-up
- Fire performance (BS and EN)
- Acoustic performance
- Max heights (Cold and EN Fire State)
- Duty
- System weight
- Nominal thickness

Performance notes

- Performance values are for imperforate, jointed systems using Siniat components (metal studs and tracks, boards, metal accessories, screws and finishing systems) and specified insulation quilt material (type and thickness) and installed to Siniat specification and installation guides.
- Any alterations may impair the quoted performance. Contact Technical Services for further system configurations and their resulting performances.
- All maximum cold state partition heights are calculated with a uniform lateral pressure of 200Pa or 0.2kN/m², the quoted height reflects the most onerous deflection limit of two conditions: 10mm deflection at 1.5m height (equivalent to Severe duty); or maximum deflection of height/240 at mid-height.
- Maximum cold state heights can be increased by reducing stud centres, increasing stud thickness or boxing studs. Contact Technical Services for advice.
- It may be possible to increase cold state heights from those quoted in the system tables where reduced deflection limits or pressure criteria are acceptable.
- 'EN Fire state Height' is the highest permissible 'fire-state' height calculated according to the following EN standards and clauses, as required to comply with Approved Document B, and where these heights are no greater than the 'cold state' mechanical height. EN 15254-3 (UK NA), EN 15254-3 (clause 6.4.1) and EN 1364-1 (DIAP).
- Insulation shown may be replaced with thicker and/or heavier quilt material without impairing the quoted performances (may also be replaced with rock mineral wool if required).
- Removing or adding insulation may impair the quoted performances. Contact technical services for further system configurations and their resulting performances.

Reading system codes

Each system displayed has a unique identification code, which spells out the build-up:

Framing—Boarding—Insulation

Examples

Single Frame Partition
CS50R-15F-25G

- Siniat CS50Rx C-stud
- 15mm Siniat Fire Board either side
- 25mm Glass mineral wool

Twin Frame Partition
TWIN(AB)-CS50R-215dB-50G

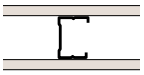
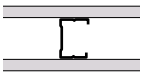
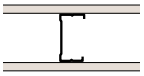
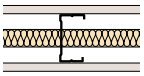
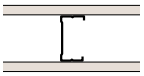
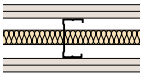
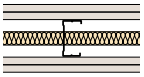
- Twin frame (with Acoustic brace)
- Siniat CS50Rx C-stud
- 2x15mm Siniat dB Board either side
- 50mm Glass mineral wool

Asymmetric Single Frame Partition
CS70R-15St#15MR

- Siniat CS70Rx C-stud
- 15mm Siniat Standard Board one side
- 15mm Siniat Moisture board other side

System performance tables

30 and 60 minute systems BS

Buildup				Performance			
	Boarding Inner Outer	**Frame** Type (600mm centres) Stud	**Insulation** (Glass mineral wool)	**Acoustic** R_w +Ctr	**Fire perf.** BS 476-22	**Max height** Cold state EN Fire state* Duty rating	**Other** Nominal thickness System weight
			(mm)	(dB)	(mins)	(m)	(mm) (kg/m²)
CS50R-12St							
	12.5mm Siniat Standard Board	Single CS50/Rx	-	36	30	2.6 - Medium	75 17.5
CS50R-15St							
	15mm Siniat Standard Board	Single CS50/Rx	-	38	30	2.75 - Medium	80 21.0
CS70R-12St							
	12.5mm Siniat Standard Board	Single CS70/Rx	-	37	30	3.2 - Medium	95 17.5
CS70R-12St-25G							
	12.5mm Siniat Standard Board	Single CS70/Rx	25mm	41	30	3.2 - Medium	95 17.5
CS70R-15St							
	15mm Siniat Standard Board	Single CS70/Rx	-	39	30	3.4 - Medium	100 21.0
CS70R-212St-25G							
	12.5mm Siniat Standard Board 12.5mm Siniat Standard Board	Single CS70/Rx	25mm	51	60	4.05 - Severe	120 34.0
CS70R-215St-25G							
	15mm Siniat Standard Board 15mm Siniat Standard Board	Single CS70/Rx	25mm	54	60	4.5 - Severe	130 41.0

*Use EN Fire state height unless otherwise specified. See page 5 for notes on alterations to partition configuration.

System performance tables

30 minute systems EN

Buildup				Performance			
	Boarding Outer	Frame Type (600mm centres) Stud	Insulation (Glass mineral wool)	Acoustic R_w +Ctr	Fire perf. EN 1364-1 & EN 13501-2	Max height Cold state EN Fire state* Duty rating	Other Nominal thickness System weight
			(mm)	(dB)	(mins)	(m)	(mm) (kg/m²)
CS50R-12FMR	12.5mm Siniat Fire MR Board	Single CS50/Rx	-	38	EI30	2.7 2.7 Medium	75 21.5
CS50R-12dB	12.5mm Siniat dB Board	Single CS50/Rx	-	39	EI30	2.8 2.8 Medium	75 23.0
CS50R-12dB-25G	12.5mm Siniat dB Board	Single CS50/Rx	25mm	42	EI30	2.8 2.8 Medium	75 23.0
CS50R-15dB	15mm Siniat dB Board	Single CS50/Rx	-	40	EI30	3 3 Heavy	80 25.0
CS50R-15St-25G	15mm Siniat Standard Board	Single CS50/Rx	25mm	41	EI30	2.75 2.75 Medium	80 21.0
CS50R-15dB-25G	15mm Siniat dB Board	Single CS50/Rx	25mm	44	EI30	3 3 Heavy	80 25.0
CS70R-12dB	12.5mm Siniat dB Board	Single CS70/Rx	-	40	EI30	3.5 3.5 Medium	95 23.0
CS70R-12dB-25G	12.5mm Siniat dB Board	Single CS70/Rx	25mm	44	EI30	3.5 3.5 Medium	95 23.0
CS70R-15dB	15mm Siniat dB Board	Single CS70/Rx	-	42	EI30	3.75 3.75 Heavy	100 25.0
CS70R-15St-25G	15mm Siniat Standard Board	Single CS70/Rx	25mm	43	EI30	3.4 3.4 Medium	100 21.0
CS70R-15dB-25G	15mm Siniat dB Board	Single CS70/Rx	25mm	46	EI30	3.75 3.75 Heavy	100 25.0

*Use EN Fire state height unless otherwise specified. See page 5 for notes on alterations to partition configuration.

System performance tables

60 minute systems EN

Buildup				Performance			
	Boarding Inner Outer	Frame Type (600mm centres) Stud	Insulation (Glass mineral wool)	Acoustic R_w +Ctr	Fire perf. EN 1364-1 & EN 13501-2	Max height Cold state EN Fire state* Duty rating	Other Nominal thickness System weight
			(mm)	(dB)	(mins)	(m)	(mm) (kg/m²)
CS50R-15FMR-25G	15mm Siniat Fire MR Board	Single CS50/Rx	25mm	41	EI60	2.75 2.75 Heavy	80 25.5
CS70R-15F	15mm Siniat Fire Board	Single CS70/Rx	-	40	EI60	3.4 3.4 Heavy	100 25.5
CS70R-15Md	15mm Megadeco	Single CS70/Rx	-	41	EI60	3.75 3.75 Severe	100 27.0
CS70R-15Aq	15mm Aquaboard™	Single CS70/Rx	-	41	EI60	3.75 3.75 Severe	100 27.0
CS70R-15Un	15mm Siniat Universal Board	Single CS70/Rx	-	41	EI60	3.75 3.75 Severe	100 27.0
CS70R-15Ld	15mm Ladura	Single CS70/Rx	-	42	EI60	4 4 Severe	100 32.0
CS70R-15F-25G	15mm Siniat Fire Board	Single CS70/Rx	25mm	45	EI60	3.4 3.4 Heavy	100 25.5
CS70R-15Aq-25G	15mm Aquaboard™	Single CS70/Rx	25mm	47	EI60	3.75 3.75 Severe	100 27.0
CS70R-15Ld-25G	15mm Ladura	Single CS70/Rx	25mm	49	EI60	4 4 Severe	100 38.0
CS70R-15Md-50G	15mm Megadeco	Single CS70/Rx	50mm	50	EI60	3.75 3.75 Severe	100 28.5

*Use EN Fire state height unless otherwise specified. See page 5 for notes on alterations to partition configuration.

Version: **2.1.0**
Published: **April 2023**

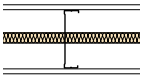
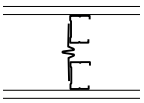
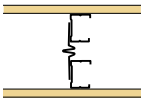
Technical services
technical@siniat@.co.uk

60 minute systems EN continued

Buildup				Performance			
	Boarding Inner Outer	Frame Type (600mm centres) Stud	Insulation (Glass mineral wool)	Acoustic R_w +Ctr	Fire perf. EN 1364-1 & EN 13501-2	Max height Cold state EN Fire state* Duty rating	Other Nominal thickness System weight
			(mm)	(dB)	(mins)	(m)	(mm) (kg/m²)
CS70R-15Un-50G	15mm Siniat Universal Board	Single CS70/Rx	50mm	50	EI60	3.75 3.75 Severe	100 27.0
CS90R-15Md	15mm Megadeco	Single CS90/Rx	-	43	EI60	4.65 4.65 Severe	120 27.0
CS90R-15Un	15mm Siniat Universal Board	Single CS90/Rx	-	43	EI60	4.65 4.65 Severe	120 27.0
CS70R-212St	12.5mm Siniat Standard Board 12.5mm Siniat Standard Board	Single CS70/Rx	-	47	EI60	4.05 4.05 Severe	120 34.0
CS70R-12MR12St	12.5mm Siniat Standard Board 12.5mm Siniat Moisture Board	Single CS70/Rx	-	48	EI60	4.05 4.05 Severe	120 34.0
CS70R-212dB	12.5mm Siniat dB Board 12.5mm Siniat dB Board	Single CS70/Rx	-	51	EI60	4.6 4.6 Severe	120 45.0
CS70R-212dB-25G	12.5mm Siniat dB Board 12.5mm Siniat dB Board	Single CS70/Rx	25mm	55	EI60	4.6 4.6 Severe	120 45.0
AS70R-212dB-50G	12.5mm Siniat dB Board 12.5mm Siniat dB Board	Single AS70/Rx	50mm	56	EI60	4.5 4.5 Severe	120 45.0
CS70R-215St	15mm Siniat Standard Board 15mm Siniat Standard Board	Single CS70/Rx	-	50	EI60	4.5 4.5 Severe	130 41.0
CS90R-212dB-25G	12.5mm Siniat dB Board 12.5mm Siniat dB Board	Single CS90/Rx	25mm	56	EI60	5.8 5 Severe	140 45.0

*Use EN Fire state height unless otherwise specified. See page 5 for notes on alterations to partition configuration.

60 minute systems EN continued

Buildup				Performance			
	Boarding Outer Accessory	**Frame** Type (600mm centres) Stud	**Insulation** (Glass mineral wool)	**Acoustic** R_w +Ctr	**Fire perf.** EN 1364-1 & EN 13501-2	**Max height** Cold state EN Fire state* Duty rating	**Other** Nominal thickness System weight
			(mm)	(dB)	(mins)	(m)	(mm) (kg/m²)
CS14R-15Md-25G							
	15mm Megadeco	Single CS146/Rx	25mm	50	EI60	7.35 7.35 Severe	176 27.5
Twin(AB)-CS50R-15Md							
	15mm Megadeco Board Siniat Acoustic V Brace	Twin CS50/Rx	-	45	EI60	4.4 4 Severe	170 27.5
Twin(AB)-CS50R-15Un							
	15mm Siniat Universal Board Siniat Acoustic V Brace	Twin CS50/Rx	25mm	45	EI60	4.4 4 Severe	170 27.5

*Use EN Fire state height unless otherwise specified. See page 5 for notes on alterations to partition configuration.

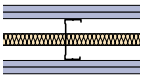
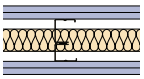
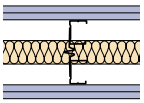
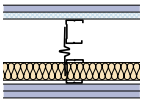
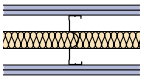
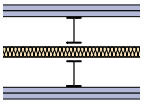
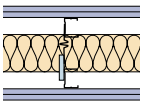
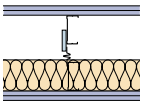
System performance tables

90 minute systems EN

Buildup				Performance			
	Boarding Inner Outer	Frame Type (600mm centres) Stud	Insulation (Glass mineral wool)	Acoustic R_w +Ctr	Fire perf. EN 1364-1 & EN 13501-2	Max height Cold state EN Fire state* Duty rating	Other Nominal thickness System weight
			(mm)	(dB)	(mins)	(m)	(mm) (kg/m²)
CS70R-12FMR12dB	12.5mm Siniat dB Board 12.5mm Siniat Fire MR Board	Single CS70/Rx	-	50	EI90	4.45 4.45 Severe	120 43.5
CS70R-12Md12dB	12.5mm Siniat dB Board 12.5mm Megadeco	Single CS70/Rx	-	51	EI90	4.6 4.6 Severe	120 45.0
CS70R-12Un12dB	12.5mm Siniat dB Board 12.5mm Siniat Universal Board	Single CS70/Rx	-	51	EI90	4.6 4.6 Severe	120 45.0
CS70R-12Aq12dB	12.5mm Siniat dB Board 12.5mm Aquaboard™	Single CS70/Rx	-	51	EI90	4.6 4.6 Severe	120 45.0
CS70R-12Md12dB-25G	12.5mm Siniat dB Board 12.5mm Megadeco	Single CS70/Rx	25mm	55	EI90	4.6 3 Severe	120 45.0
CS70R-15Md12St-25G	12.5mm Siniat Standard Board 15mm Megadeco	Single CS70/Rx	25mm	54	EI90	4.9 4.9 Severe	125 49.0
CS70R-15FMR15dB-25G	15mm Siniat dB Board 15mm Siniat Fire MR Board	Single CS70/Rx	25mm	56	EI90	4.65 4.65 Severe	130 49.5
CS70R-215dB-25G	15mm Siniat dB Board 15mm Siniat dB Board	Single CS70/Rx	25mm	57	EI90	5.25 5 Severe	130 53.0
AS70R-215dB-50G	15mm Siniat dB Board 15mm Siniat dB Board	Single AS70/Rx	50mm	58	EI90	5.15 5 Severe	130 53.0
RAS70P-215dB-50G	15mm Siniat dB Board 15mm Siniat dB Board	Single RAS70/P	50mm	58 -8	EI90	5.15 4 Severe	130 53.0

*Use EN Fire state height unless otherwise specified. See page 5 for notes on alterations to partition configuration.

90 minute systems EN continued

Buildup				Performance			
	Boarding Inner Outer Accessory	**Frame** Type (600mm centres) Stud	**Insulation** (Glass mineral wool)	**Acoustic** R_w +Ctr	**Fire perf.** EN 1364-1 & EN 13501-2	**Max height** Cold state EN Fire state* Duty rating	**Other** Nominal thickness System weight
			(mm)	(dB)	(mins)	(m)	(mm) (kg/m²)
CS90Y-215dB-25G							
	15mm Siniat dB Board 15mm Siniat dB Board	Single CS90/Y	25mm	51	EI90	7.3 5 Severe	150 54.5
RAS90P-215dB-50G							
	15mm Siniat dB Board 15mm Siniat dB Board	Single RAS90/P	50mm	59 -7	EI90	6.3 4 Severe	150 53.0
Twin(AB)-CS50R-215dB-50G							
	15mm Siniat dB Board 15mm Siniat dB Board Siniat Acoustic V Brace	Twin CS50/Rx	50mm	63 -8	EI90	5.3 4 Severe	200 53.5
Twin(AB)-CS50R-15dB15Sx#215dB-50G							
	Side A 15mm Siniat Securtex 15mm Siniat dB Board Side B 15mm Siniat dB Board 15mm Siniat dB Board Siniat Acoustic V Brace	Twin CS50/Rx	50mm	64 -9	EI90	5.3 4 Severe	200 53.5
AS14R-215dB-50G							
	15mm Siniat dB Board 15mm Siniat dB Board	Single AS146/Rx	50mm	62 -8	EI90	7.85 5 Severe	206 53.5
Twin(UB)-IS70B-215dB-25G							
	15mm Siniat dB Board 15mm Siniat dB Board	Twin IS70/B	25mm	63 -8	EI90	4 4 Severe	210 56.0
Twin(AB)-CS50R-215dB-100G(250)							
	15mm Siniat dB Board 15mm Siniat dB Board Siniat Acoustic V Brace	Twin CS50/Rx	100mm	65 -6	EI90	6.7 4 Severe	250 53.5
Twin(AB)-CS90W-215dB-100G(300)							
	15mm Siniat dB Board 15mm Siniat dB Board Siniat Acoustic V Brace	Twin CS90/W	100mm	69 -9	EI90	8.9 4 Severe	300 56.0

*Use EN Fire state height unless otherwise specified. See page 5 for notes on alterations to partition configuration.

Version: **2.1.0**
Published: **April 2023**

Technical services
technical@siniat@.co.uk

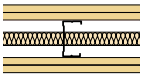
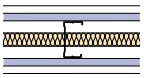
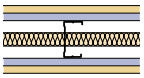
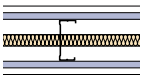
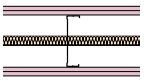
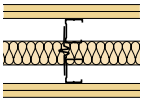
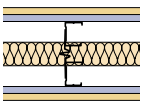
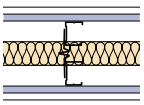
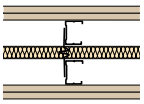
System performance tables

120 minute systems EN

Buildup				Performance			
	Boarding Inner Outer	Frame Type (600mm centres) Stud	Insulation (Glass mineral wool)	Acoustic R_w +Ctr	Fire perf. EN 1364-1 & EN 13501-2	Max height Cold state EN Fire state* Duty rating	Other Nominal thickness System weight
			(mm)	(dB)	(mins)	(m)	(mm) (kg/m²)
CS70R-212F	12.5mm Siniat Fire Board 12.5mm Siniat Fire Board	Single CS70/Rx	-	49	EI120	4.3 4 Severe	120 42.0
CS70R-212Md	12.5mm Megadeco 12.5mm Megadeco	Single CS70/Rx	-	51	EI120	4.6 4.6 Severe	120 45.0
CS70R-212F-25G	12.5mm Siniat Fire Board 12.5mm Siniat Fire Board	Single CS70/Rx	25mm	54	EI120	4.3 4 Severe	120 42.0
CS70R-212Md-25G	12.5mm Megadeco 12.5mm Megadeco	Single CS70/Rx	25mm	55	EI120	4.6 4.6 Severe	120 45.0
CS70R-212Un-25G	12.5mm Siniat Universal Board 12.5mm Siniat Universal Board	Single CS70/Rx	25mm	55	EI120	4.6 4.6 Severe	120 45.0
CS70R-215F	15mm Siniat Fire Board 15mm Siniat Fire Board	Single CS70/Rx	-	51	EI120	4.5 4.5 Severe	130 50.0
CS70R-215Md	15mm Megadeco 15mm Megadeco	Single CS70/Rx	-	53	EI120	5.25 5 Severe	130 53.0
CS70R-215Un	15mm Siniat Universal Board 15mm Siniat Universal Board	Single CS70/Rx	-	53	EI120	5.25 5 Severe	130 53.0
CS70R-215F-25G	15mm Siniat Fire Board 15mm Siniat Fire Board	Single CS70/Rx	25mm	55	EI120	4.5 4.5 Severe	130 50.0
CS70R-215Md-25G	15mm Megadeco 15mm Megadeco	Single CS70/Rx	25mm	57	EI120	5.25 5 Severe	130 53.0

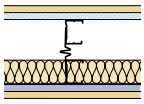
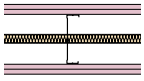
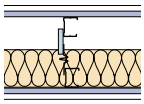
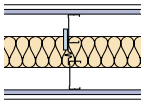
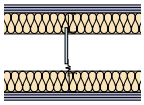
*Use EN Fire state height unless otherwise specified. See page 5 for notes on alterations to partition configuration.

120 minute systems EN continued

Buildup				Performance			
	Boarding Inner Outer Accessory	**Frame** Type (600mm centres) Stud	**Insulation** (Glass mineral wool)	**Acoustic** R_w +Ctr	**Fire perf.** EN 1364-1 & EN 13501-2	**Max height** Cold state EN Fire state* Duty rating	**Other** Nominal thickness System weight
			(mm)	(dB)	(mins)	(m)	(mm) (kg/m²)
CS70R-215Un-25G							
	15mm Siniat Universal Board 15mm Siniat Universal Board	Single CS70/Rx	25mm	57	EI120	5.25 5 Severe	130 53.0
CS70R-15Md15dB-25G							
	15mm Siniat dB Board 15mm Megadeco	Single CS70/Rx	25mm	57	EI120	5.25 4 Severe	130 53.0
CS70R-15Un15dB-25G							
	15mm Siniat dB Board 15mm Siniat Universal Board	Single CS70/Rx	25mm	57	EI120	5.25 4 Severe	130 53.0
CS90R-15Md15dB-25G							
	15mm Siniat dB Board 15mm Megadeco	Single CS90/Rx	25mm	58 -8	EI120	6.6 4 Severe	150 53.0
CS14R-212F-25G							
	12.5mm Siniat Fire Board 12.5mm Siniat Fire Board	Single CS146/Rx	25mm	57	EI120	8 4 Severe	196 42.5
Twin(AB)-CS50R-215Un-50G							
	15mm Siniat Universal Board 15mm Siniat Universal Board Siniat Acoustic V Brace	Twin CS50/Rx	50mm	63 -8	EI120	5.3 4 Severe	200 53.5
Twin(AB)-CS50R-15Un15dB-50G							
	15mm Siniat dB Board 15mm Siniat Universal Board Siniat Acoustic V Brace	Twin CS50/Rx	50mm	63 -8	EI120	5.3 4 Severe	200 53.5
Twin(AB)-CS50R-15Md15dB-50G							
	15mm Siniat dB Board 15mm Megadeco Siniat Acoustic V Brace	Twin CS50/Rx	50mm	63 -8	EI120	5.3 4 Severe	200 53.5
Twin(AB)-CS50R-215Ld-25G							
	15mm Ladura 15mm Ladura Siniat Acoustic V Brace	Twin CS50/Rx	25mm	64 -8	EI120	5.3 4 Severe	200 63.5

*Use EN Fire state height unless otherwise specified. See page 5 for notes on alterations to partition configuration.

120 minute systems EN continued

Buildup			Performance			
Boarding Inner Outer Accessory	Frame Type (600mm centres) Stud	Insulation (Glass mineral wool)	Acoustic R_w +Ctr	Fire perf. EN 1364-1 & EN 13501-2	Max height Cold state EN Fire state* Duty rating	Other Nominal thickness System weight
		(mm)	(dB)	(mins)	(m)	(mm) (kg/m²)
Twin(AB)-CS50R-15Un15Sx#15dB15Un-50G						
 **Side A** 15mm Siniat Securtex 15mm Siniat Universal Board **Side B** 15mm Siniat dB Board 15mm Siniat Universal Board Siniat Acoustic V Brace	Twin CS50/Rx	50mm	64 -9	EI120	5.3 4 Severe	200 53.5
CS14Y-215F-25G						
 15mm Siniat Fire Board 15mm Siniat Fire Board	Single CS146/Y	25mm	51	EI120	9.3 5 Severe	206 52.5
Twin(AB)-CS50R-15Md15dB-100G(250)						
 15mm Siniat dB Board 15mm Megadeco Siniat Acoustic V Brace	Twin CS50/Rx	100mm	65 -6	EI120	6.7 4 Severe	250 53.5
Twin(AB)-CS90W-15Md15dB-100G(300)						
 15mm Siniat dB Board 15mm Megadeco Siniat Acoustic V Brace	Twin CS90/W	25mm	69 -9	EI120	8.9 4 Severe	300 56.0
Twin(AB)-CS90W-315dB-200G(450)						
 15mm Siniat dB Board 2x15mm Siniat dB Board Siniat Acoustic V Brace	Twin CS90/W	200mm	74 -7	EI120	12.29 4 Severe	450 69.0

*Use EN Fire state height unless otherwise specified. See page 5 for notes on alterations to partition configuration.

system guidance

Siniat C stud **partition system**

Siniat Metal Stud Partitioning is an economical, friction-fit system for assembling internal partitions. The unique design of the components ensures high strength, easy installation and a higher performing alternative to traditional timber frame partitions.

Siniat C Stud Partitions are constructed using a frame of Siniat U Track at the head and base with Siniat C Studs for vertical framing elements.

A range of Siniat C Stud and U Track widths allow varying partition depth, enhancing fire resistance, sound insulation and maximum heights. For individual system performances, refer to the system performance tables on pages 7 to 29.

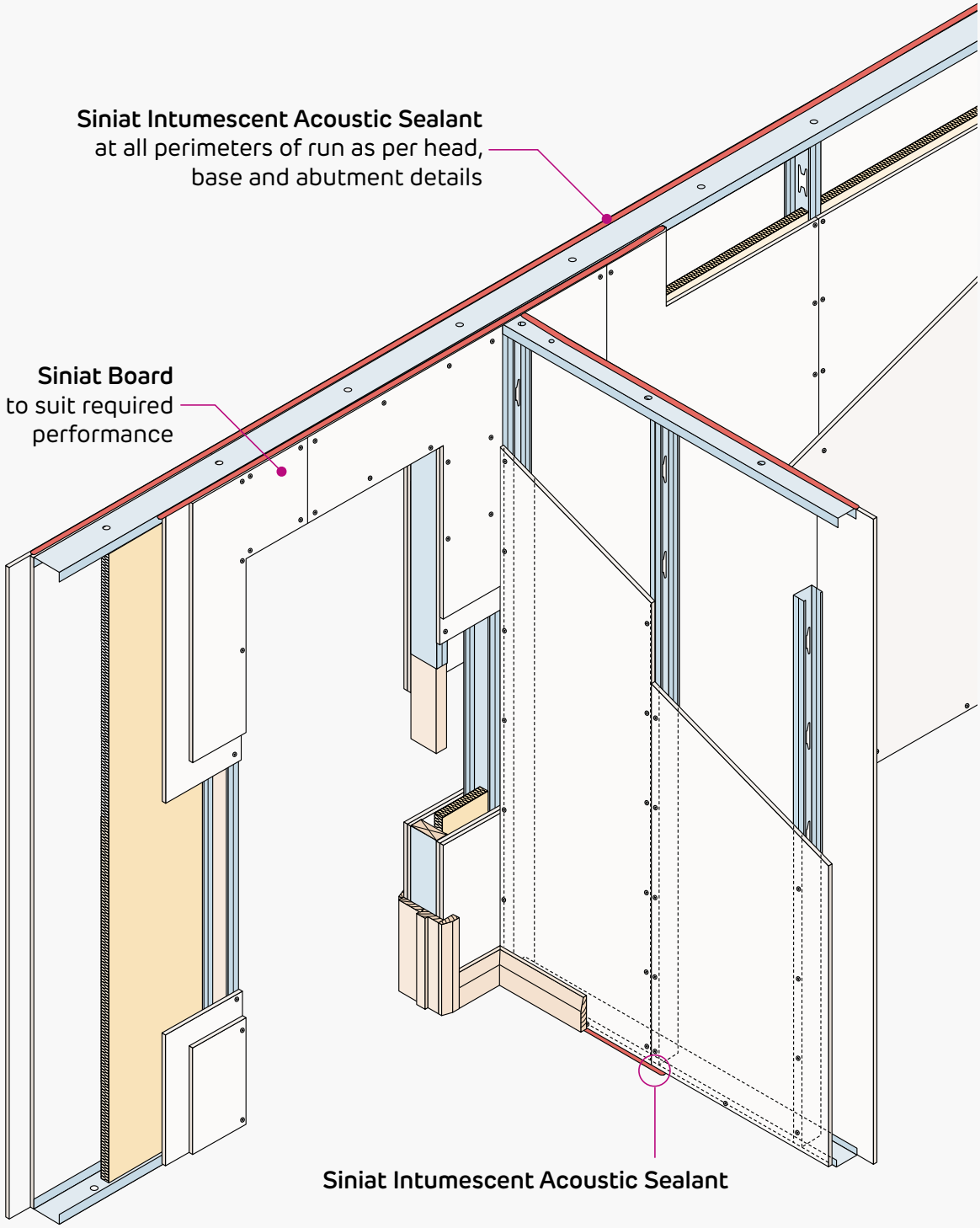
Where to use:

- Siniat C Stud Partitions create internal dividing walls within both domestic and commercial projects.

Features	Benefits
Strong	Less material is required than a similar timber frame structure
Lightweight	Multiple lengths can be carried at one time
Natural resistance to bowing, bending and insect infestation	Metal maintains shape, removing the chance of 'screw popping'
High fire resistance performance	Fire performance requirements are easily achieved using metal
High acoustic performance	Acoustic performance requirements are easily achieved using metal
Flat finish	Provides an easy surface for decoration

Version: **2.1.0**
Published: **April 2023**

Technical services
technical@siniat@.co.uk


Siniat Intumescent Acoustic Sealant
at all perimeters of run as per head, base and abutment details
Siniat Board
to suit required performance
Siniat Intumescent Acoustic Sealant

system components

boards

All Siniat Boards
Provides wall surface suitable for finishing.

See System performance tables, page 7 to 29

frame

Siniat C Stud
Metal profile for vertical frame elements.

CS50/RX, CS60/RX, CS70/RX, CS90/RX, CS146/RX, CS90/W, CS70/Y, CS90/Y, CS146/Y

Siniat U Track
Metal profile for head and base frame elements.

UT52/RX/Y, UT62/RX, UT72/RX, UT92/RX, UT148/RX

Siniat U Track Deep
Used for partitions with heights exceeding 4.2m.

UDT52/P, UDT62/P, UDT72/P, UDT92/P, UDT148/P

Siniat U Track Extra Deep
Used for partitions with heights exceeding 7.2m.

UXT72/B, UXT92/W, UXT148/W

Siniat Fixing Channel
Provide support for plasterboard joints and fixtures

MFIX

Siniat Metal Angle
Multi-purpose galvanised metal section.

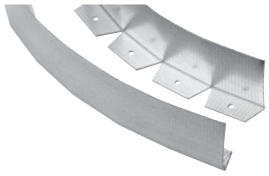
MFC2525, MFC2550, MFC2330

Siniat Flat Strap
Provide support for plasterboard joints and fixtures.

FS50/RX, FS90/W

Siniat Patress Bracket
For attaching pattressing to Siniat partition or framed lining systems.

MFPB/RX



Siniat Flex Track Deep Flange
Steel track for curved partitions

MCJ3048

fix

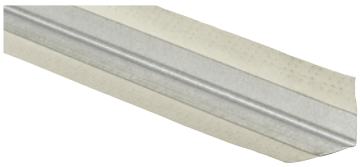
Siniat Drywall Screws (as appropriate)
For mechanical fixing of boards to Siniat Shallow Wall Channel.

See annex d: screw selection guide

insulation

Glass Mineral Wool Insulation
To improve acoustic performance

finishing



Siniat Corner and Edge beads
Corner and edge reinforcement.

Siniat Joint Tape
Joint reinforcement in conjunction with Siniat Jointing Compounds.

Siniat Foil Roll Intumescent Acoustic Sealant
For use as an acoustic sealant, resilient adhesive, decorators caulk and as fire resisting intumescent mastic

Siniat Compounds
To finish joints between boards and bed corner beads prior to decorating. Ensures system performance.

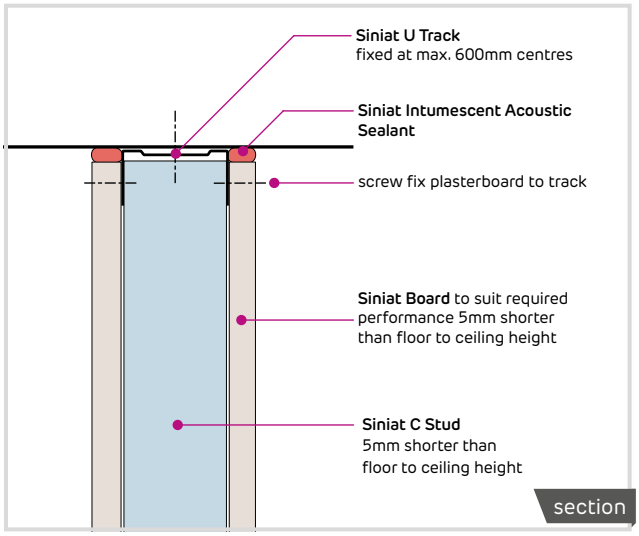
See annex b: product reference

Siniat Sealer
To seal plasterboard prior to decoration.

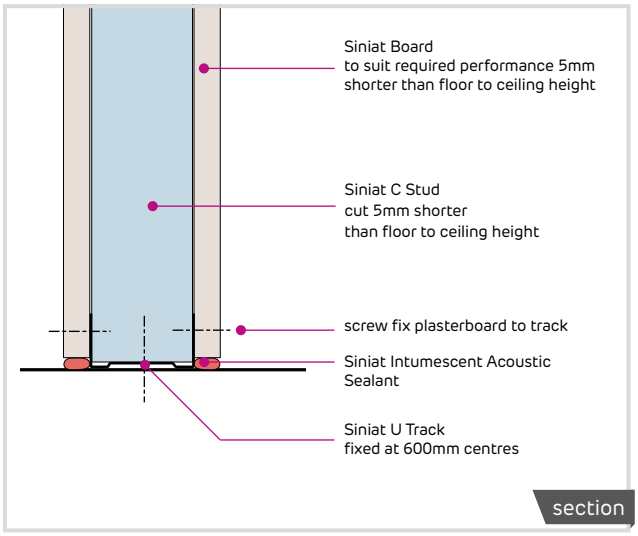
system guidance

Frame

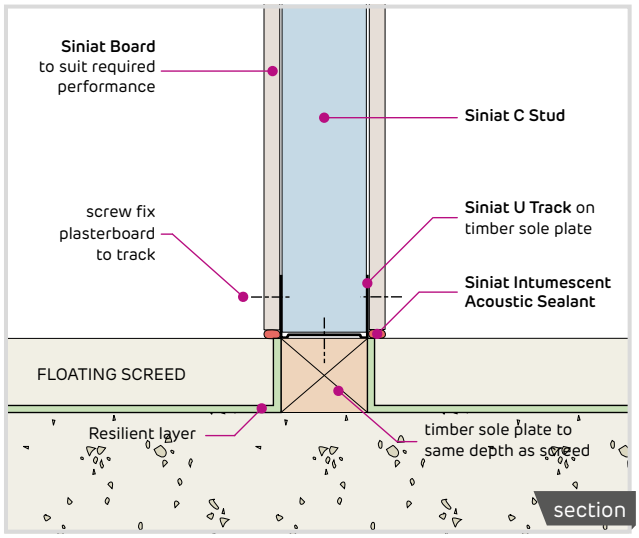
PT-CS-101S-Head – no deflection



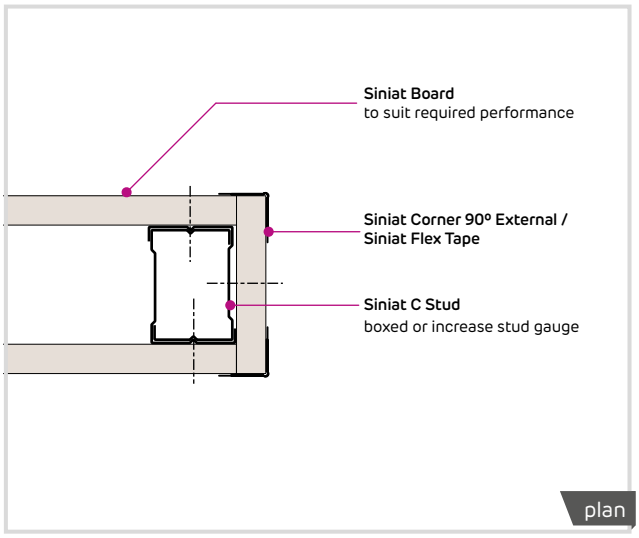
PT-CS-102S-Base



PT-CS-103S-Base with timber sole plate and screed



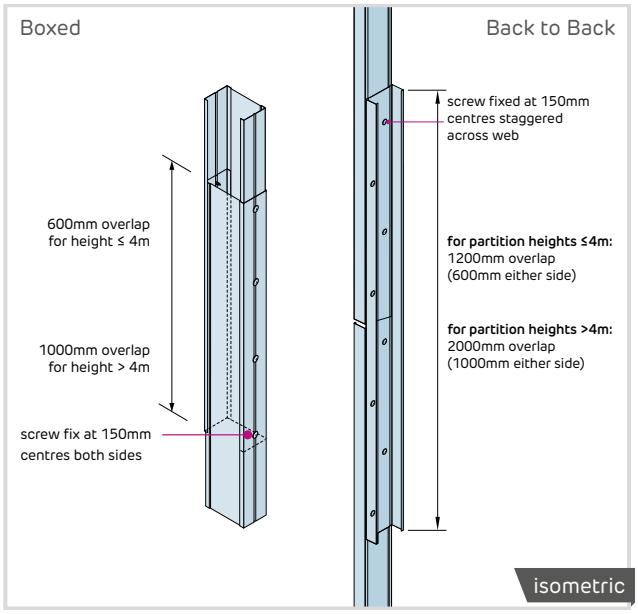
PT-CS-104P- Fair End detail



Frame continued

- Select compatible sizes (e.g. 50mm stud and 52mm track) of Siniat C Stud and Siniat U Track framing elements to meet system performance.
- For partition heights over 4.2m, head/base track must be appropriate width Siniat Deep Flange U-Tracks as a minimum. For partition heights over 7.2m, head/base track must be appropriate width Siniat Extra Deep Flange U-Tracks.
- Studs abutting structure (starter studs) to be fixed with web flat to structure using appropriate fixings by others at maximum 600mm centres.
- Siniat U Track to be fixed flat to a suitable structure using appropriate fixings by others at maximum 600mm centres.
- Timber sole plate may be required on uneven floors or where partition is constructed prior to screeding.
- Protect base track from moisture with damp proof membrane when situated on newly laid concrete floors.
- All Siniat C Studs to be 5mm shorter than floor to ceiling height except in case of head deflection requirement (see page 29).
- Intermediate Siniat C Studs, facing in same direction, to be friction fitted into tracks to allow for adjustment during boarding.
- Siniat C Studs to be at centres required to meet system performance with a maximum of 600mm centres.

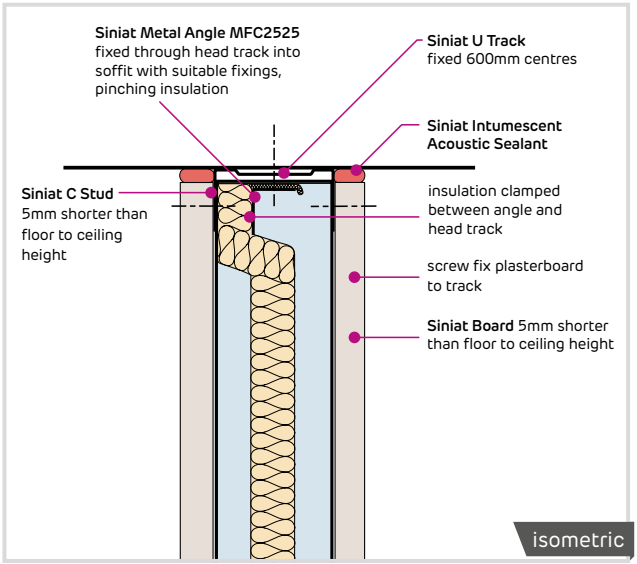
PT-CS-105M-Stud splice options



- Where wall height exceeds available Siniat Stud length splice two lengths together ensuring overlap of 600mm for heights less than 4m and 1000mm for heights more than 4m.
- Service cut outs in a Siniat C stud to be a minimum of 100mm away from ends of studs.

Insulation

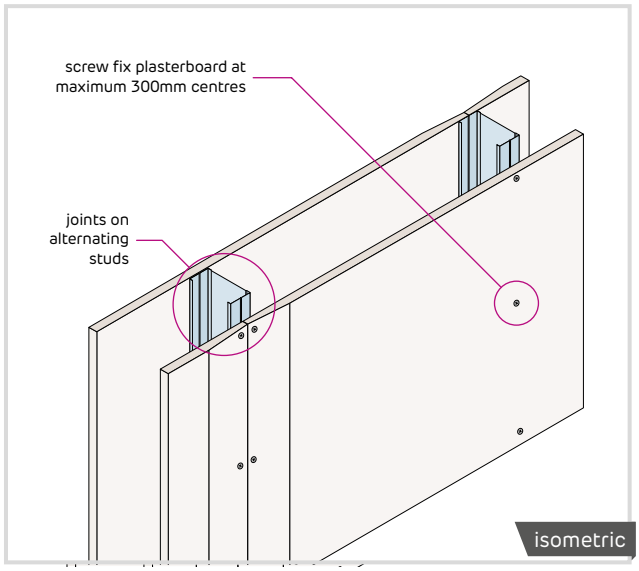
PT-CS-151M-Insulation fixing method



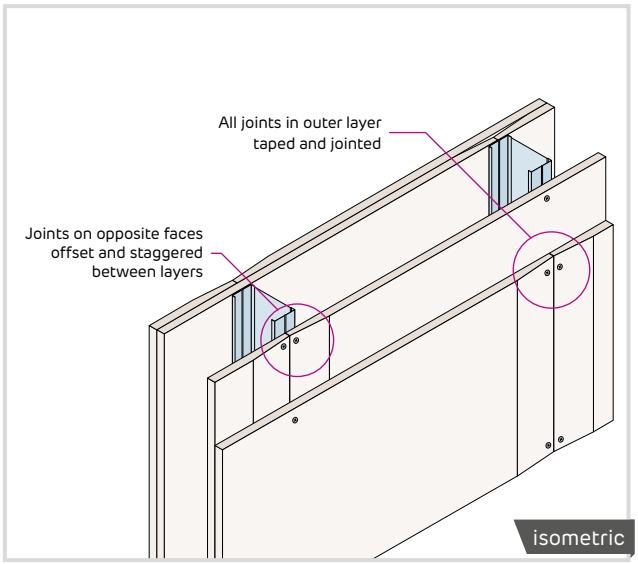
- Insulation, if required, to be of type and thickness to achieve performance and installed in a continuous layer between frames or studs.
- Insulation to be clamped between Siniat Metal Angle fixed through to head track or soffit. (Two fixings per 600mm strip, approx. 300mm apart.)

Boarding

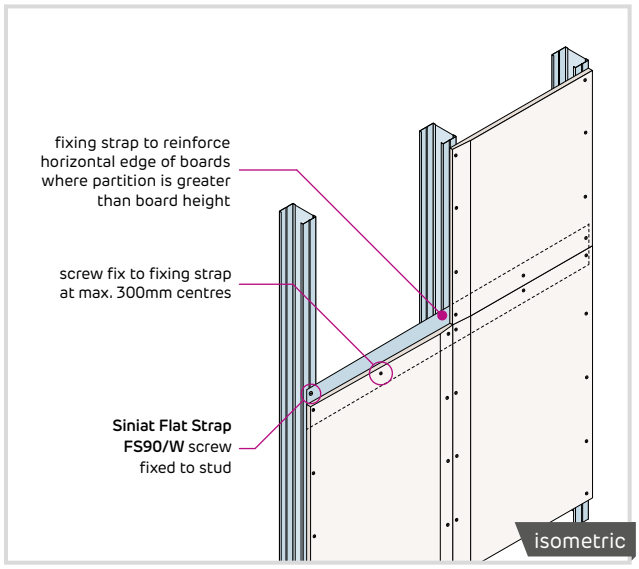
PT-CS-201M-Board fixing – single layer



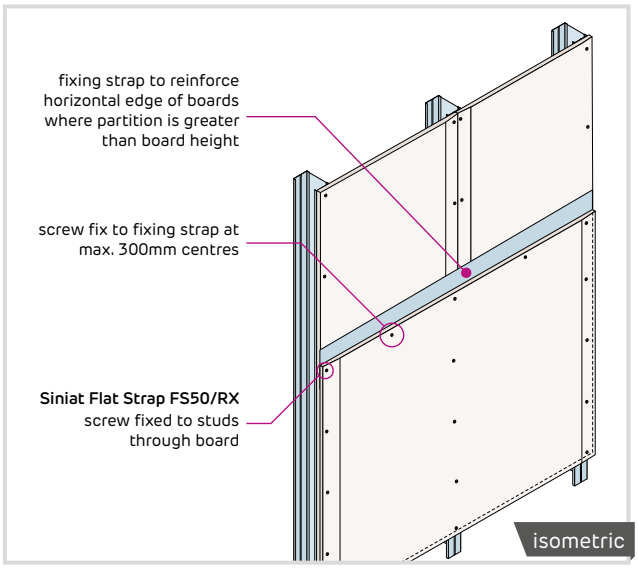
PT-CS-202M-Board fixing – double layer



PT-CS-203M-Horizontal joint reinforcement, single layer



PT-CS-204M-Horizontal joint reinforcement, double layer



- Siniat Single Frame partition system is suitable for single, double and multiple layer boarding.
- Select base layer(s) and finishing layer(s) Siniat Boards by consulting section on pages 7 to 29.
- Boards to be 5mm less than floor to ceiling height except in case of deflection requirement, see page 29.
- Strips of board 300mm wide or less to be avoided by stud location rearrangement.
- Boards to be mechanically fixed to studs at 300mm centres using appropriate Siniat Drywall Screws see annex d: screw selection guide.
- Base layers of boarding may be temporarily fixed at 600mm centres providing final layer is fixed through to stud at 300mm centres.
- Board edges to be centred over studs.
- Stagger all horizontal and vertical board joints between layers by a minimum of 300mm.
- Stagger all horizontal and vertical board joints on opposing sides of partition.

Boarding continued

Over-height single layer boarding:

- Where partition height exceeds board height Siniat Flat Strap FS90/W to be installed behind all horizontal joints to provide substrate for board fixing.

Over-height multiple layer boarding:

- Where partition height exceeds board height for double or multiple layer boarding Siniat Flat Strap FS50/RX to be installed behind horizontal joints between inner and outer layer of board.

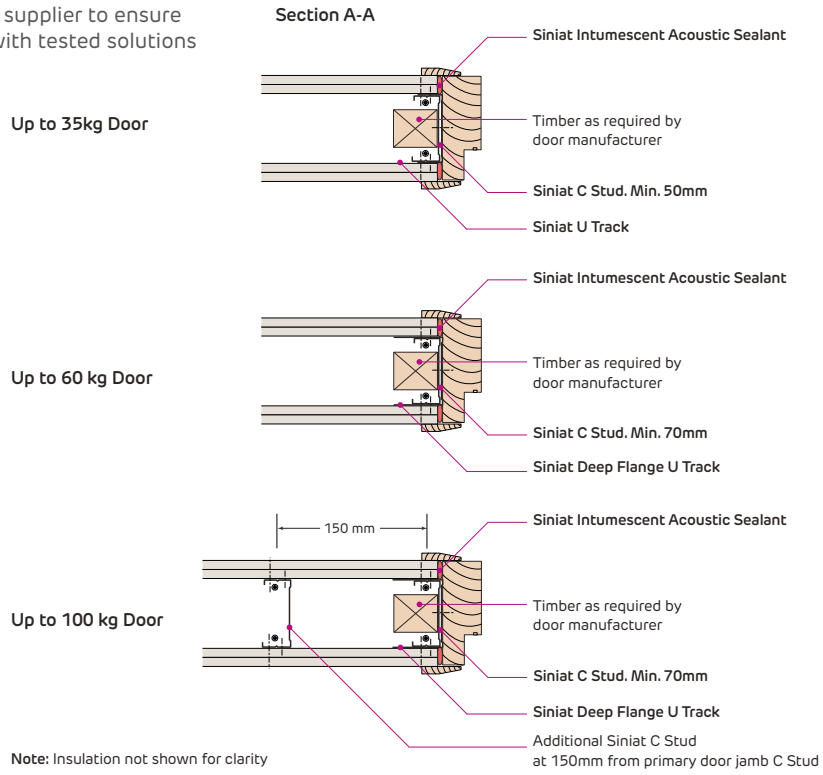
Movement control joints

- Form movement control joints at maximum 10m intervals in the partition run.
- Form movement control joints where the partition crosses a structural movement joint.

Openings

PT-CS-401P-Door frames – 30kg to 100kg door loads

Consult doorset supplier to ensure details comply with tested solutions



Note: Insulation not shown for clarity

plan

PT-CS-403E-Single and double door frames

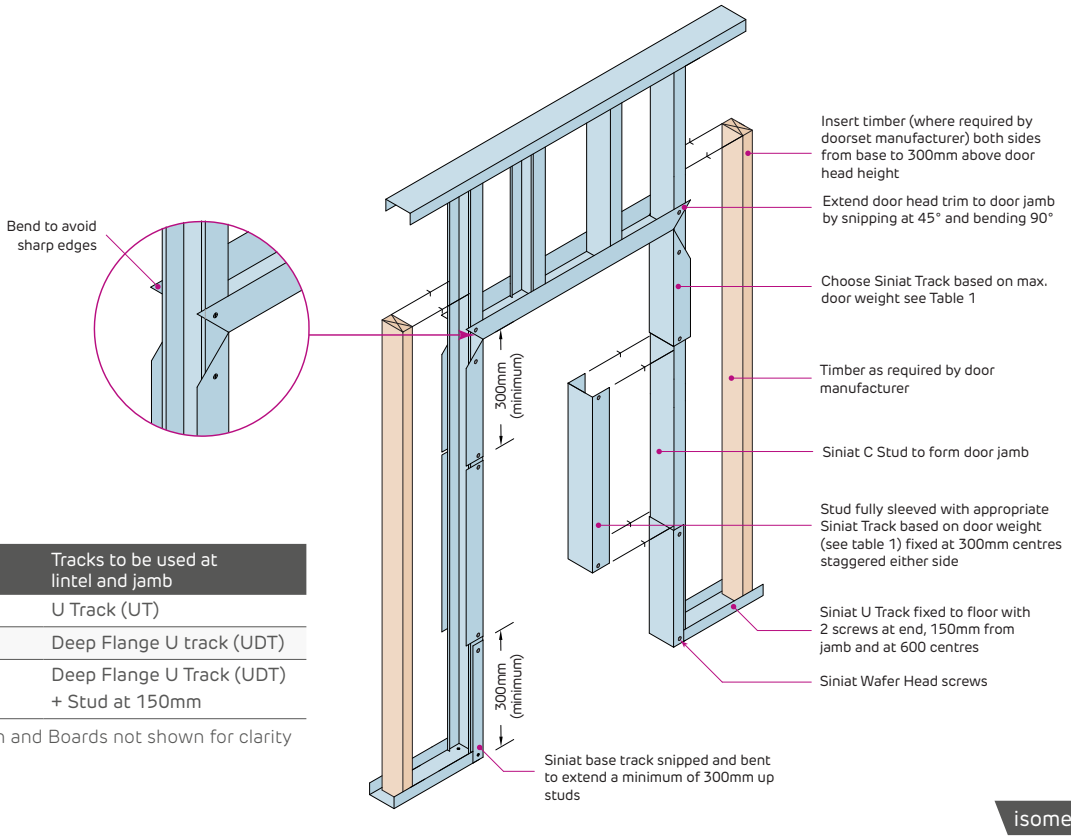


Table 1

Maximum Door Weight	Tracks to be used at lintel and jamb
up to 35kg	U Track (UT)
up to 60kg	Deep Flange U track (UDT)
up to 100kg	Deep Flange U Track (UDT) + Stud at 150mm

Note: Insulation and Boards not shown for clarity

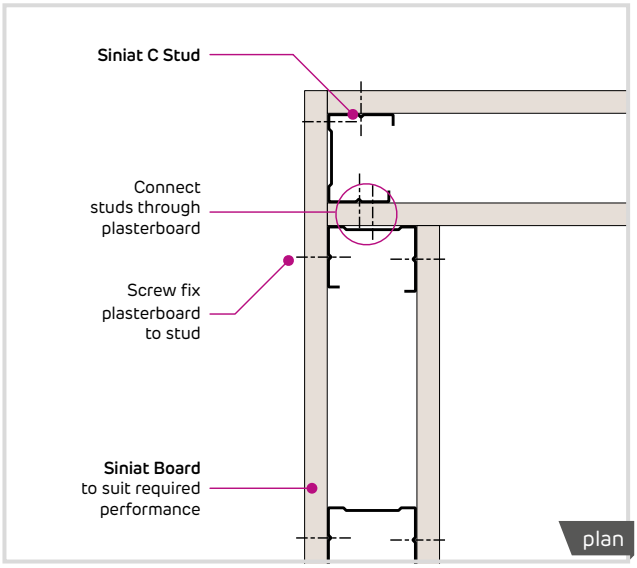
isometric

Openings continued

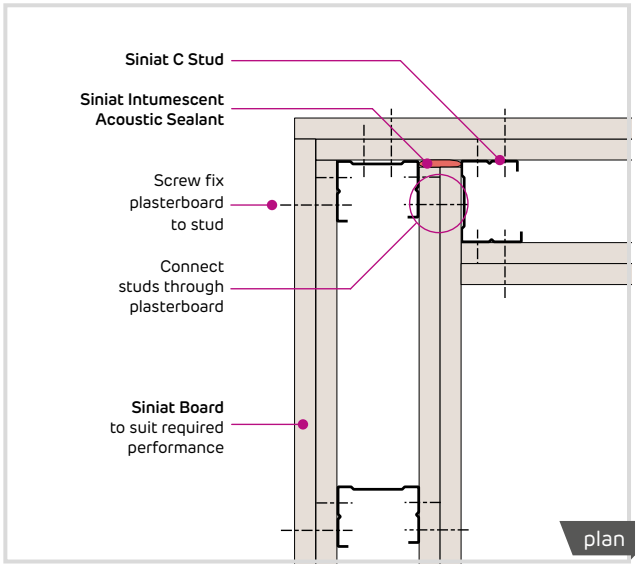
- Form openings following guidance in Construction Detail Drawings to suit door weights.
- Reinforce head-to-jamb junction 300mm down each jamb stud by cutting and folding head track.
- Reinforce jamb studs with timber and boxed studs as described in Construction Detail Drawings.
- Jamb studs to be fixed to track with appropriate Siniat Drywall Screws (see annex d: screw selection guide).
- Consult doorset supplier to ensure details comply with tested solutions.

Corners and junctions

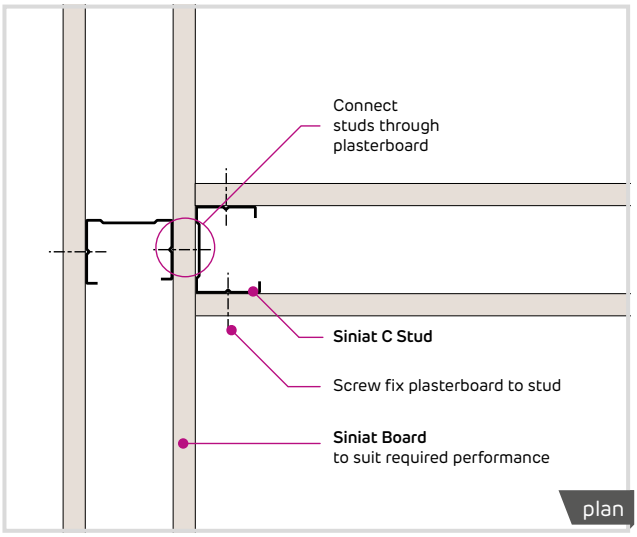
PT-CS-501P-Corner detail, single layer



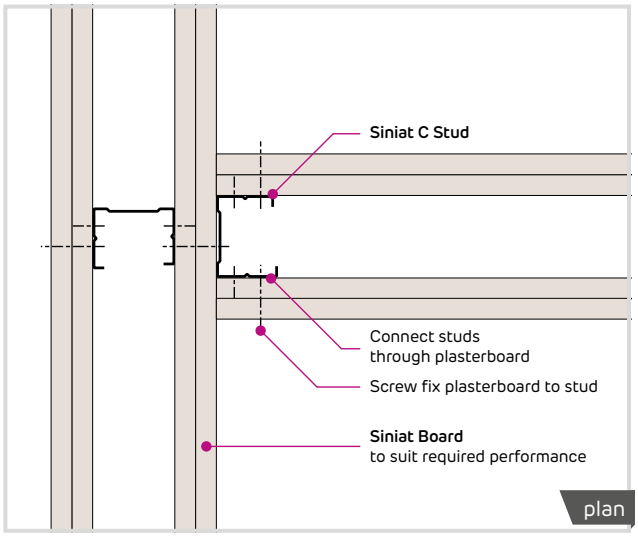
PT-CS-502P-Corner detail, double layer



PT-CS-503P-Non-acoustic T-junction, single layer

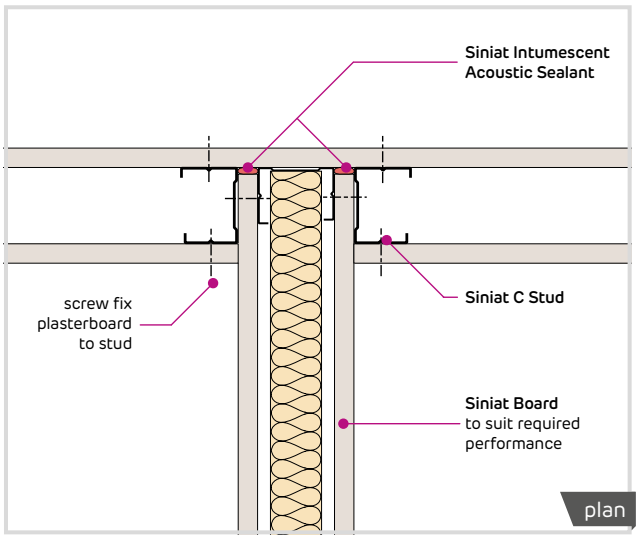


PT-CS-504P-Non-acoustic T-junction, double layer

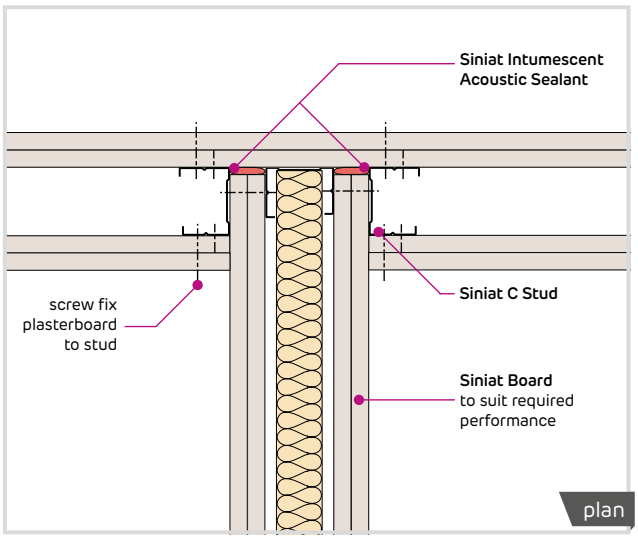


Corners and junctions continued

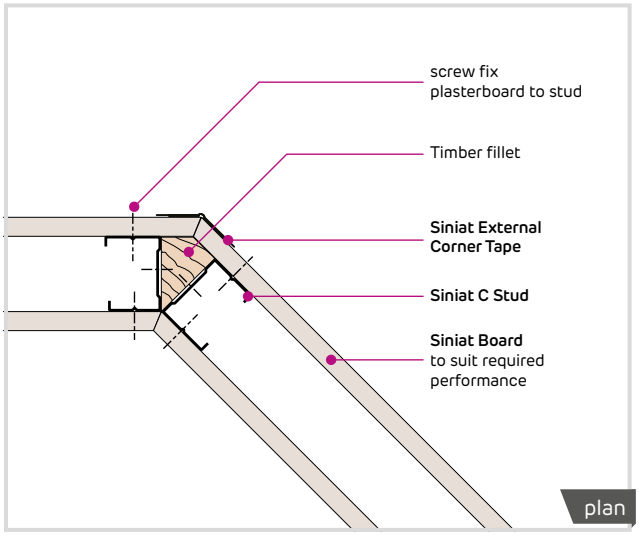
PT-CS-505P-Acoustic T-junctions, single layer



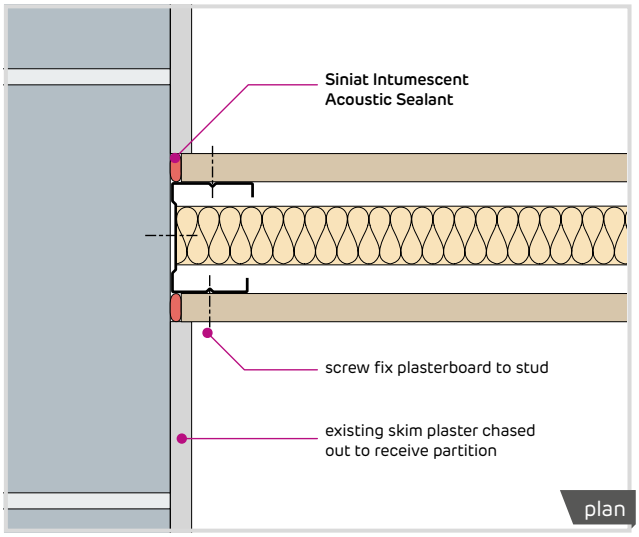
PT-CS-506P-Acoustic T-junctions, double layer



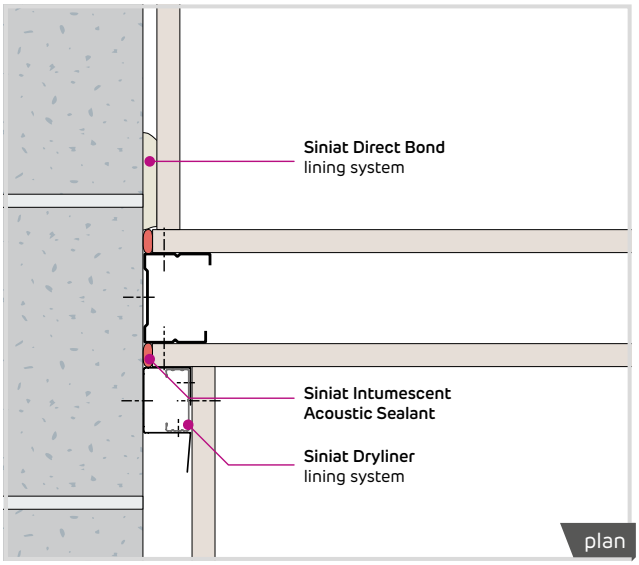
PT-CS-507P-Splayed corners



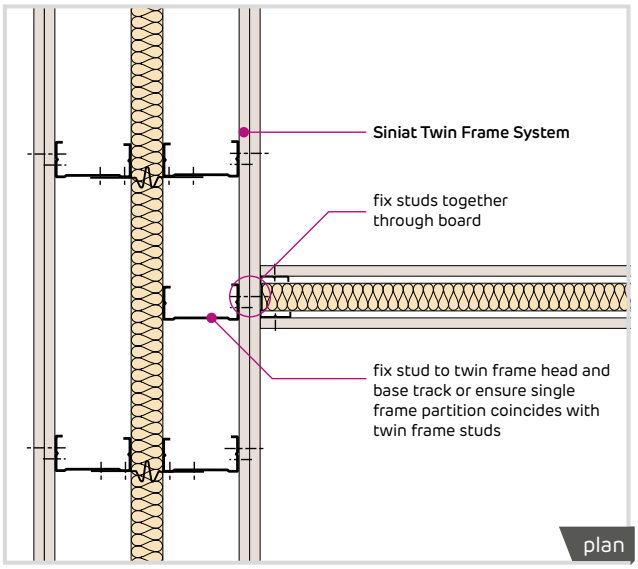
PT-CS-509P-Junction with Masonry – Plastered



PT-CS-510P-Junction with Masonry – Dryliner & Direct Bond



PT-CS-513P-T-Junction of Single into Twin Frame

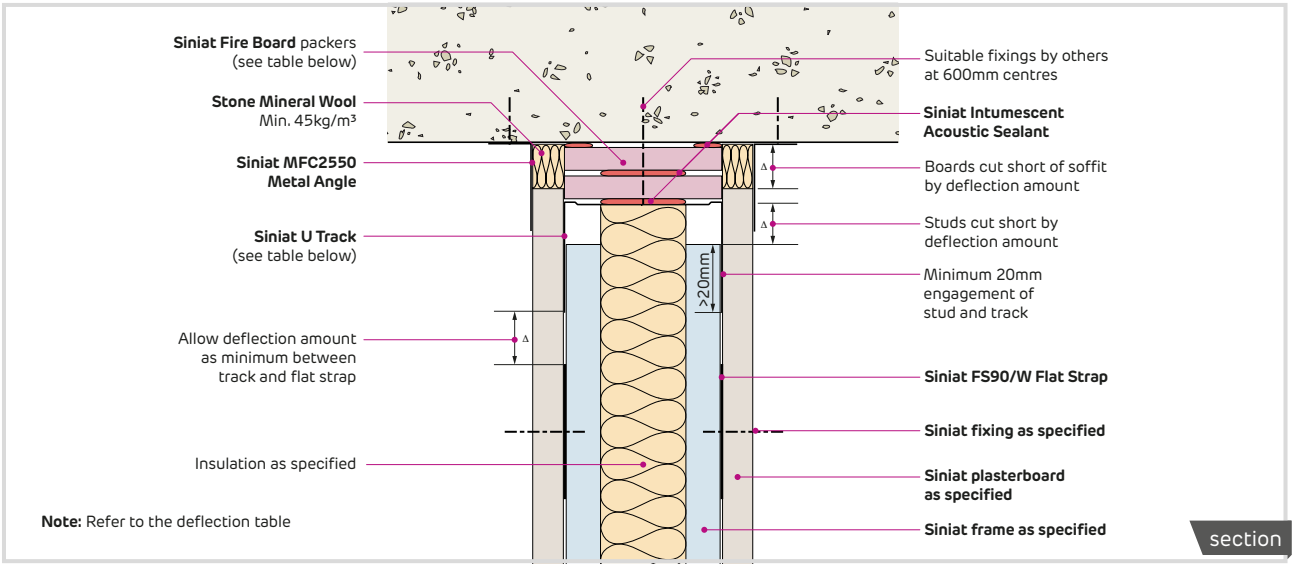


Corner and junctions continued

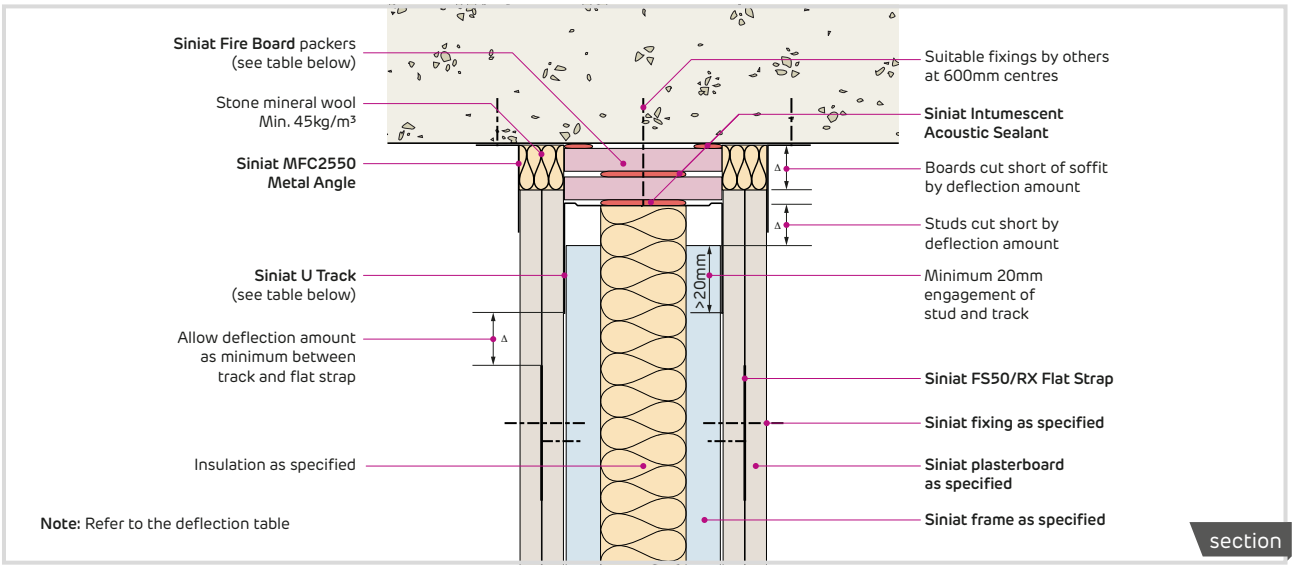
- Fire strategy to be confirmed prior to construction to ensure appropriate compartmentation is maintained.
- Abutting partitions to coincide with studs, install additional intermediate 'pick-up' stud if required.
- Connect studs through plasterboards at corners and junctions at 600mm vertical centres using appropriate Siniat Drywall Screws.
- When two differing systems join, the lower performing is split at the junction.
- See Construction Details Drawings for further guidance on arrangement and fixing.

Head deflection

EN Deflection head for up to 60 mins rated partitions



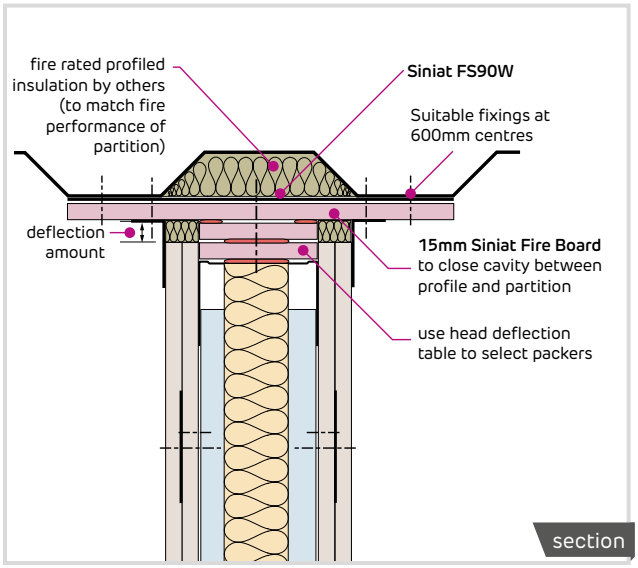
EN Deflection head for up to 120 mins rated partitions



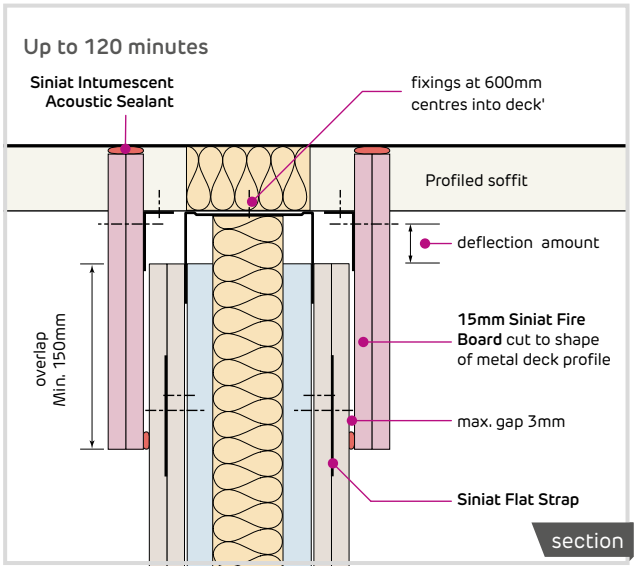
Deflection required	Packer for all fire ratings	Track for all fire ratings	30 – 120 mins
6-10mm	15mm Siniat Fire Board	Siniat U Track (UT)	Siniat MFC2550 and Stone Mineral Wool (Min. 45kg/m³)
11-20mm	2x 12.5mm Siniat Fire Board	Siniat Deep Flange U Track (UDT)	Siniat MFC2550 and Stone Mineral Wool (Min. 45kg/m³)
21-25mm	2x 15mm Siniat Fire Board	Siniat Deep Flange U Track (UDT)	Siniat MFC2550 and Stone Mineral Wool (Min. 45kg/m³)
26-30mm	3x 12.5mm Siniat Fire Board	Siniat Deep Flange U Track (UDT)	Siniat MFC2550 and Stone Mineral Wool (Min. 45kg/m³)
31-40mm	3x 15mm Siniat Fire Board	Siniat Extra Deep Flange U Track (UXT)	Siniat MFC2550 and Stone Mineral Wool (Min. 45kg/m³)

Head deflection continued

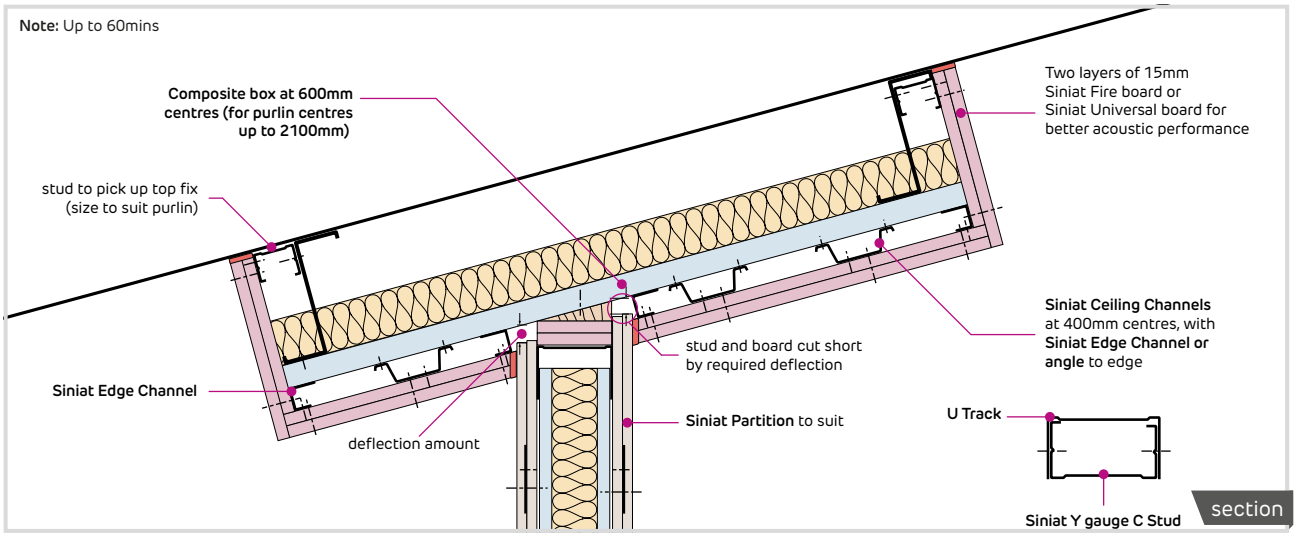
PT-CS-603S-Def. Head – parallel to profiled soffit



PT-CS-604S-Def. Head – perpendicular to simple profile

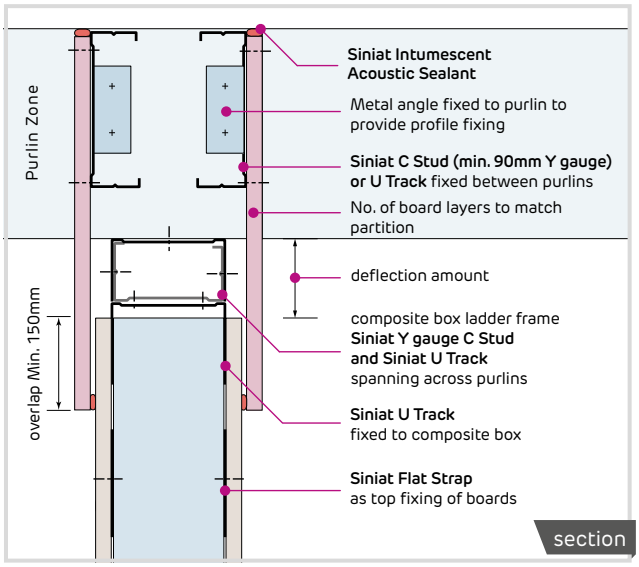


PT-CS-606S-Def. Head – parallel to purlins – purlins cloaked

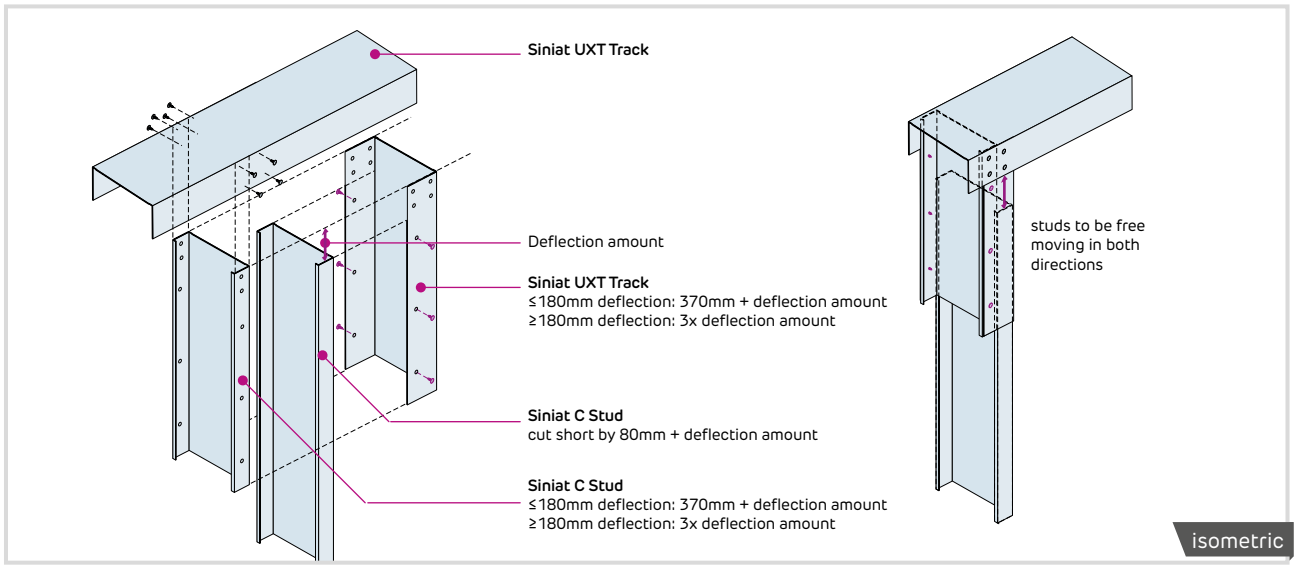


Head deflection continued

PT-CS-608S-Def. Head – perpendicular to purlins



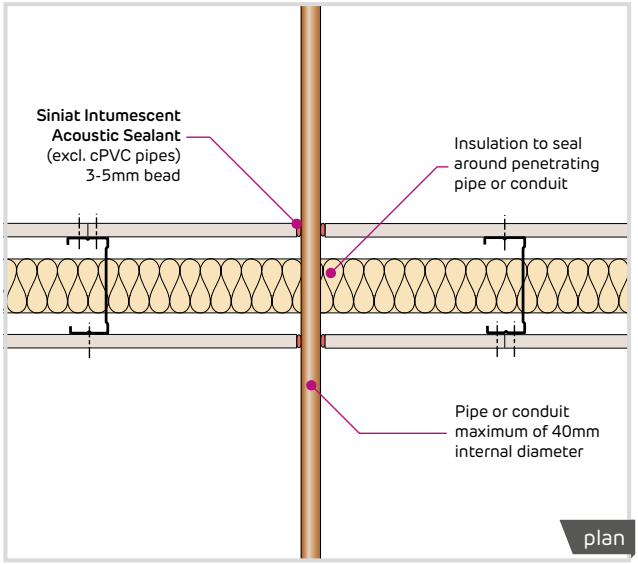
PT-CS-610M-Telescopic deflection head assembly



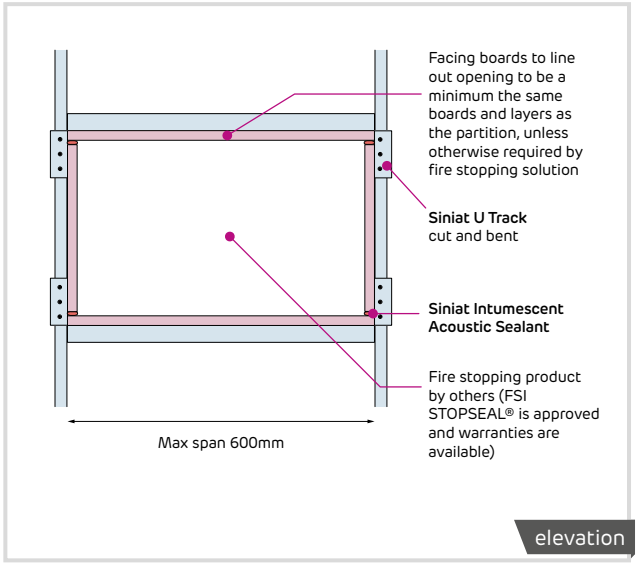
- See Construction Detail Drawings and Tables for full details.
- Continuity of head packer to be maintained.
- No mechanical connection to be made between stud and head track.
- All air paths to be sealed with Siniat Intumescent Acoustic Sealant.
- Siniat Studs to be cut short of track by deflection amount.
- Siniat Studs and Tracks to overlap by minimum 20mm.
- Siniat Boards to be short of partition height by deflection amount.

Penetrations

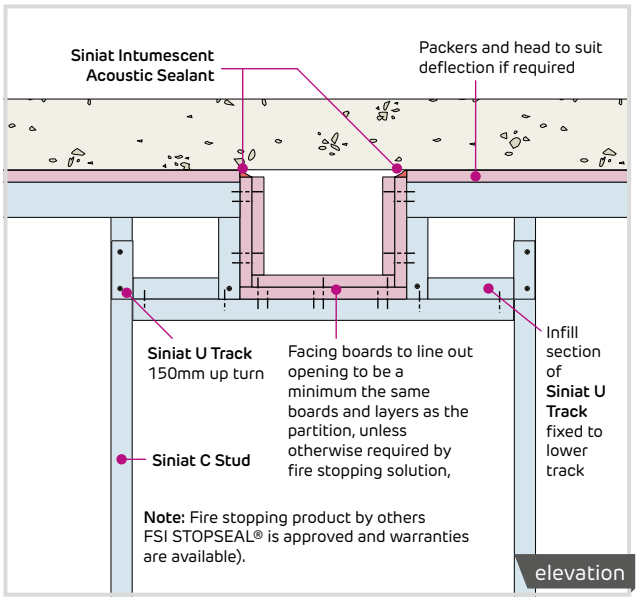
PT-CS-701P-Small diameter pipe penetration



PT-CS-702E-Service penetration detail



PT-CS-703M-Penetration at soffit



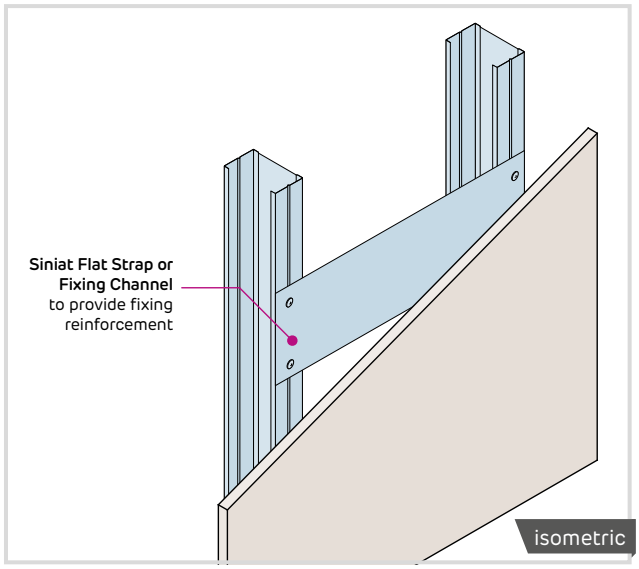
- M&E runs and other services to be pre-planned to minimise or eliminate penetrations through rated partitions.
- Penetrations should not coincide with door jamb studs.
- Pipe penetrations of 40mm diameter or less may be sealed with Siniat Intumescent Acoustic Sealant. (For cPVC pipes use Promat HPEx Sealant).
- Details shown are typical supporting constructions for proprietary fire-stopping products, seek further advice from fire-stopping product supplier on installation and tested details.
- All dampers must be independently supported with no load to be taken by the partition. Consult damper manufacturer for tested details.

FSI DEVELOP MANUFACTURE PROTECT
FIRE STOPPING & COMPARTMENTATION SYSTEMS

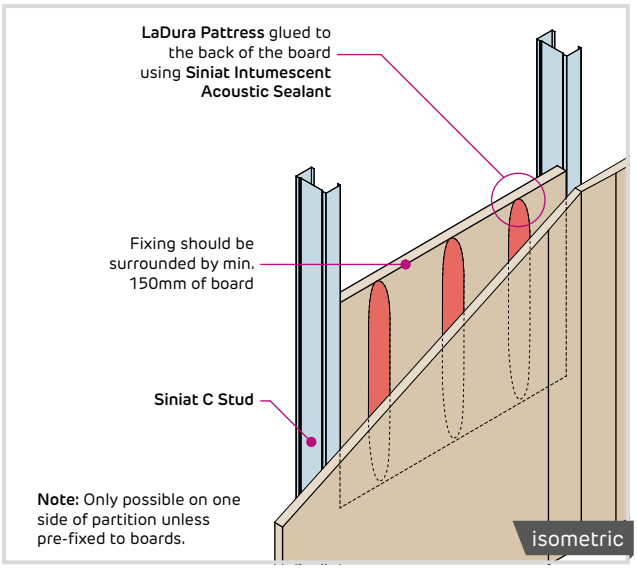
FSI fire-stopping products are approved for use with Siniat systems and combined warranties are available.

Fixtures

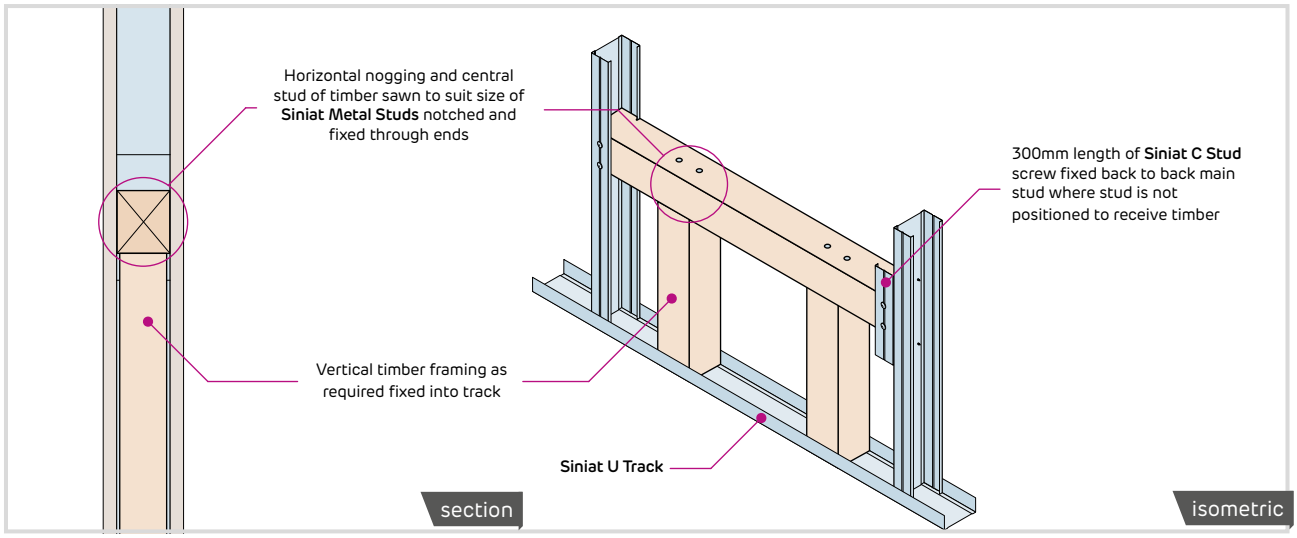
PT-CS-801M-Flat strap for light-weight fixtures



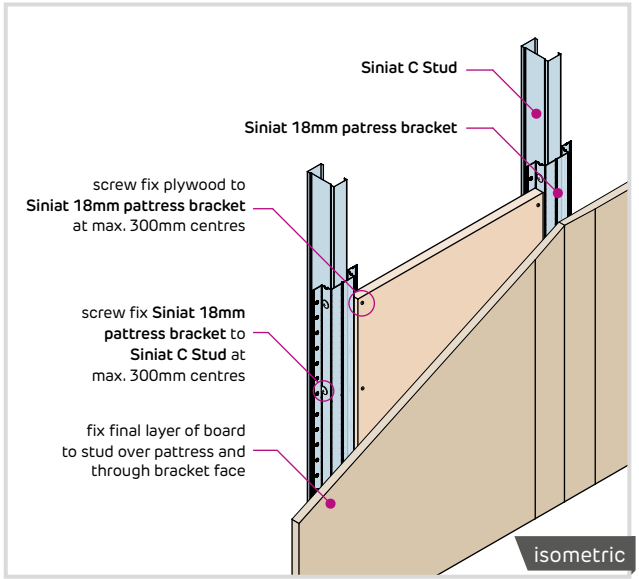
PT-CS-804M-LaDura adhesive pattress for medium-heavy-weight fixtures



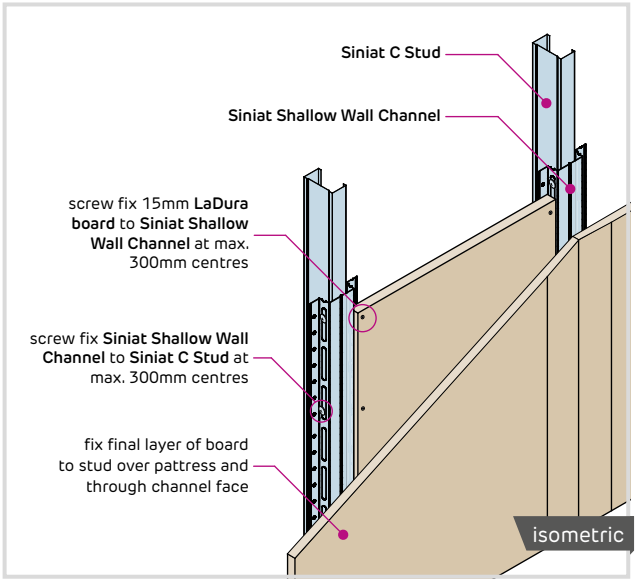
PT-CS-803M-Timber support for extreme-weight fixtures



PT-CS-802M-18mm plywood pattress for heavy-weight fixtures



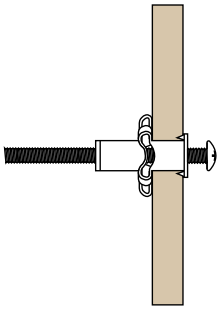
PT-CS-805M-LaDura channel pattress for heavy-weight fixtures

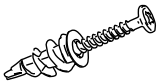


Fixtures continued

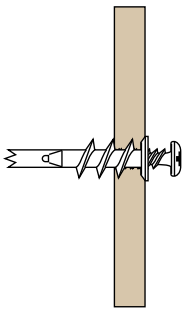
- Select fixture details for recommended fixture provision in combination with fixing capability.
- Appropriate fixings for loadings and substrate to be supplied by others.
- Site testing of fixings with plasterboard is recommended.
- LaDura is a limited combustibility patress option.
- Mobile or adjustable fixtures, e.g. swing arm brackets require timber pattressing.
- For high loadings partitions must be checked for overall robustness and upgrades of studs may be required.
- Siniat Boards have been tested for pull-out strength in combination with Spit fixings, see maximum loadings and required arrangements in summary table. Other manufacturer's fixings will require further testing before use.

Spit Hollow Wall Anchor





Spit Driva®



Design pull-out loads (kN) including safety factor

Board Arrangement	With 15mm LaDura pattress		Without pattress	
	Spit Driva®	Spit Hollow Wall Anchor	Spit Driva®	Spit Hollow Wall Anchor
Single layer 15mm Siniat Standard Boards*	0.35	0.7	0.15	0.35
Single layer 15mm Siniat Technical Boards**	0.35	0.75	0.2	0.4
Single layer 15mm LaDura	0.4	0.85	0.25	0.5
Double layer 15mm Siniat Standard Boards*	0.4		0.25	0.55
Double layer 15mm Siniat Technical Boards**	0.45		0.3	0.65
Double layer 15mm LaDura	0.5		0.4	0.85

*Standard boards are those up to 10kg/m^2 for 15mm boards
**Technical boards are those up to 13kg/m^2 for 15mm boards

Finishing

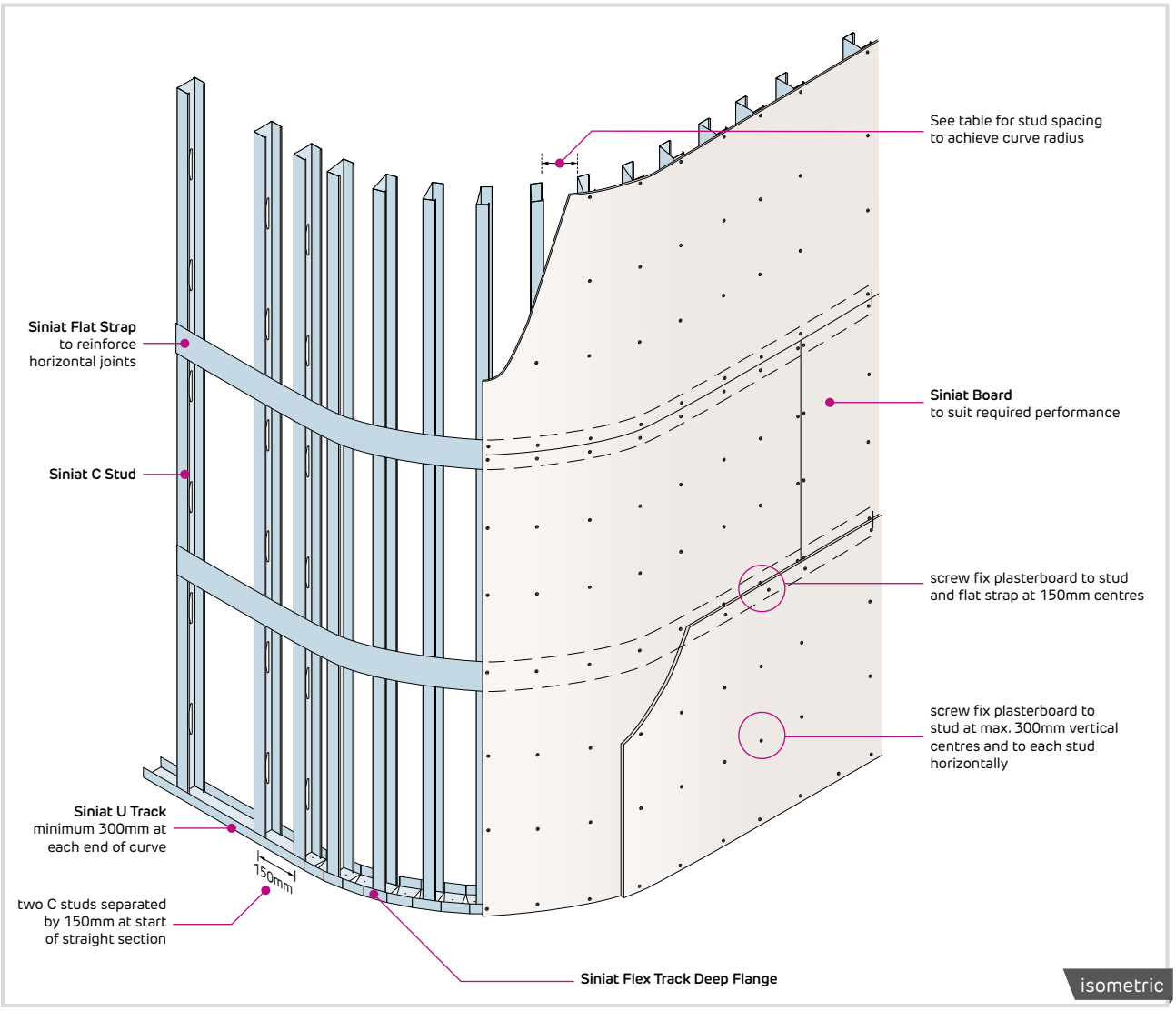
- All board joints to be taped, jointed or finished according to guidance in annex a1: taping and jointing to achieve system performances.
- Siniat Finish materials appropriate to board type to be used.

System continuity

- Bead of Siniat Intumescent Acoustic Sealant to be applied to perimeter of all runs and in all other locations specified in Construction Detail Drawings.
- Siniat Intumescent Acoustic Sealant to seal all other acoustic or air paths to prevent fire/smoke spread and acoustic transmission.
- Full, imperforate system continuity to be maintained to achieve rated performances.

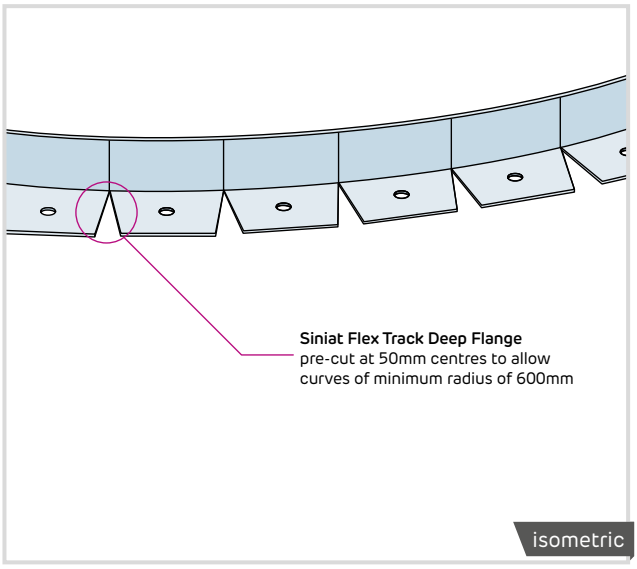
Curved partitions

PT-CS-901M-Single frame curved partition

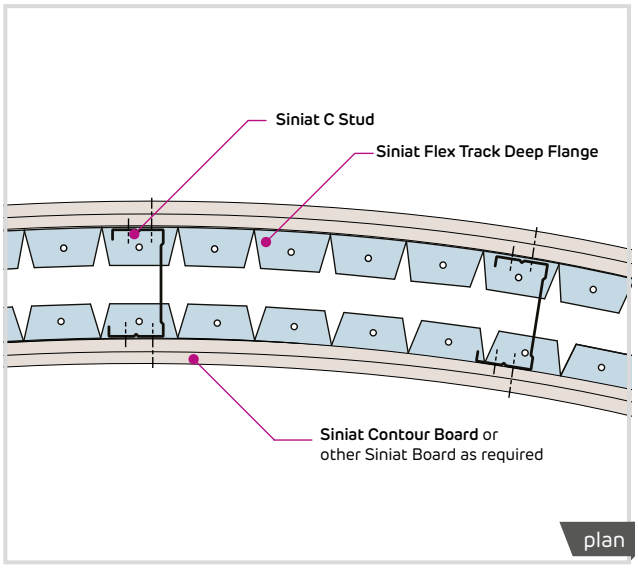


Curved partitions continued

PT-CS-902M-Flex track component



PT-CS-903P-Curved partition plan



- Boards to be installed horizontally.
- Fix boards to continuous band of Siniat Flat Strap FS90/W behind all horizontal joints.
- For tight curving, slightly dampen the boards using a brush or roller. Install and dry immediately.
- System performance may vary.

	Maximum stud centres (mm)			
Radius (m)	6mm Siniat Contour Board	9.5mm Siniat Board	12.5mm Siniat Board	15mm Siniat Board
0.6 – 0.8	150 Wet	–	–	–
0.9 – 1.0	200 Dry	150 Wet	–	–
1.1 – 1.5	200 Dry	200 Wet	150 Wet	–
1.6 – 2.0	200 Dry	250 Wet	200 Wet	–
2.1 – 3.0	200 Dry	300 Wet	200 Wet	150 Wet
3.1 – 4.0	300 Dry	450 Wet	400 Wet	200 Wet
4.1 – 8.0	300 Dry	450 Wet	500 Wet	400 Wet
8.1 – 11.0	300 Dry	600 Dry	600 Dry	600 Wet
> 11.0	300 Dry	600 Dry	600 Dry	600 Dry

system guidance

Siniat acoustic stud **partition system**

The Siniat Acoustic Stud is an alternative to 70mm, 90mm and 146mm Siniat C Studs, where higher levels of acoustic performance are needed from a partition.

With a unique profile design, the engineered slots create a spring section, resulting in less acoustic energy being transmitted through the stud and sound is absorbed within the partition.

Compatibility with the Siniat C Stud system and all Siniat Boards allows a range of partition performances within identical footprints. For individual system performances, refer to the System Performance Tables on pages 7 to 29.

Where to use:

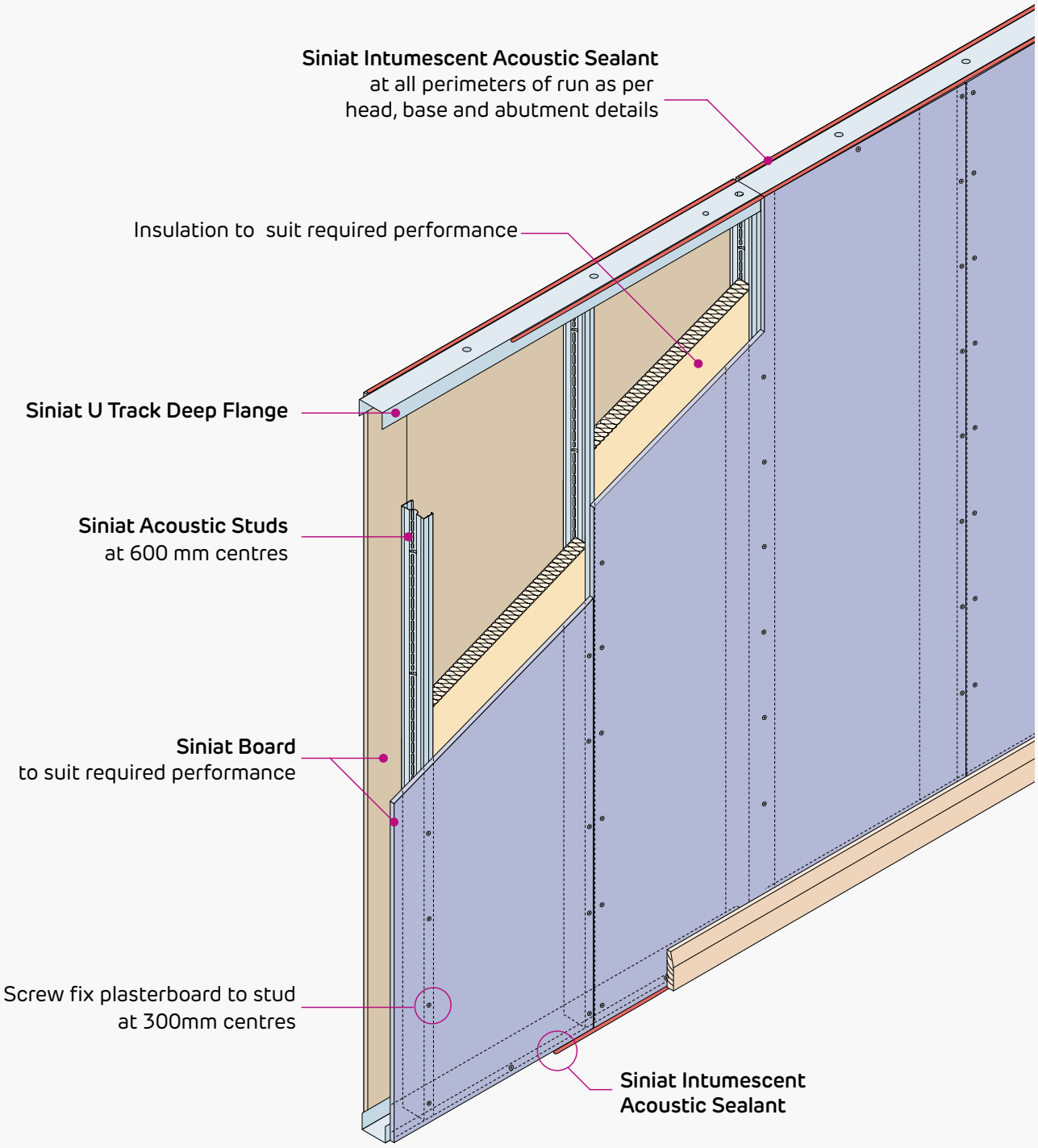
- Siniat Acoustic Stud is an internal partition system for commercial and domestic applications requiring high acoustic performance requirements.

Benefits from all key features as detailed for Siniat C Stud, plus:

Features	Benefits
Compatible with Siniat U Tracks	Only requires one change in component in a specification and on site
	Partition types can be mixed on site
Unique spring section design	Can provide increase in acoustic performance compared to equivalent C-Stud

Version: **2.1.0**
Published: **April 2023**

Technical services
technical@siniat@.co.uk


Siniat Intumescent Acoustic Sealant
at all perimeters of run as per
head, base and abutment details
Insulation to suit required performance
Siniat U Track Deep Flange
Siniat Acoustic Studs
at 600 mm centres
Siniat Board
to suit required performance
Screw fix plasterboard to stud
at 300mm centres
Siniat Intumescent
Acoustic Sealant

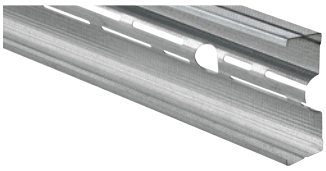
system components

boards

All Siniat Boards
Provides wall surface suitable for finishing.

See System performance tables, page 7 to 29

frame



Siniat Acoustic Stud
Metal profile for vertical frame elements with improved acoustic performance

AS70/RX, AS90/RX, AS146/RX

Siniat C Stud
Metal profile for vertical frame elements.

CS50/RX, CS60/RX, CS70/RX, CS90/RX, CS146/RX, CS90/W, CS70/Y, CS90/Y, CS146/Y

Siniat U Track
Metal profile for head and base frame elements.

UT52/RX/Y, UT62/RX, UT72/RX, UT92/RX, UT148/RX

Siniat U Track Deep
Used for partitions with heights exceeding 4.2m.

UDT52/P, UDT62/P, UDT72/P, UDT92/P, UDT148/P

Siniat U Track Extra Deep
Used for partitions with heights exceeding 7.2m.

UXT72/B, UXT92/W, UXT148/W

Siniat Fixing Channel
Provide support for plasterboard joints and fixtures

MFIX

Siniat Metal Angle
Multi-purpose galvanised metal section.

MFC2525, MFC2550, MFC2330

Siniat Flat Strap
Provide support for plasterboard joints and fixtures.

FS50/RX, FS90/W

Siniat Patress Bracket
For attaching pattressing to Siniat partition or framed lining systems.

MFPB/RX

fix

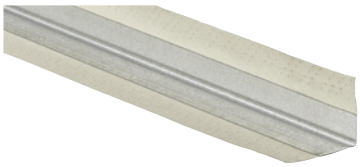
Siniat Drywall Screws (as appropriate)
For mechanical fixing of boards to Siniat Shallow Wall Channel.

See annex d: screw selection guide

insulation

Glass Mineral Wool Insulation
To improve acoustic performance

finishing



Siniat Corner and Edge beads
Corner and edge reinforcement.

Siniat Joint Tape
Joint reinforcement in conjunction with Siniat Jointing Compounds.

Siniat Foil Roll Intumescent Acoustic Sealant
For use as an acoustic sealant, resilient adhesive, decorators caulk and as fire resisting intumescent mastic

Siniat Compounds
To finish joints between boards and bed corner beads prior to decorating. Ensures system performance.

See annex b: product reference

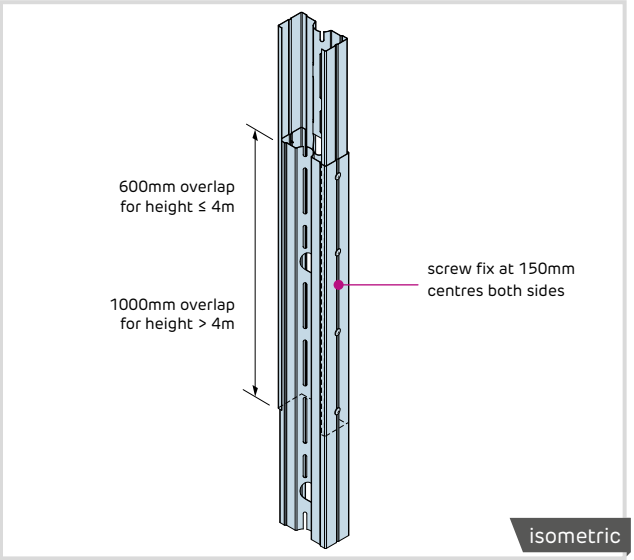
Siniat Sealer
To seal plasterboard prior to decoration.

system guidance

See guidance in Siniat C stud partition system and additional considerations given below:

Frame

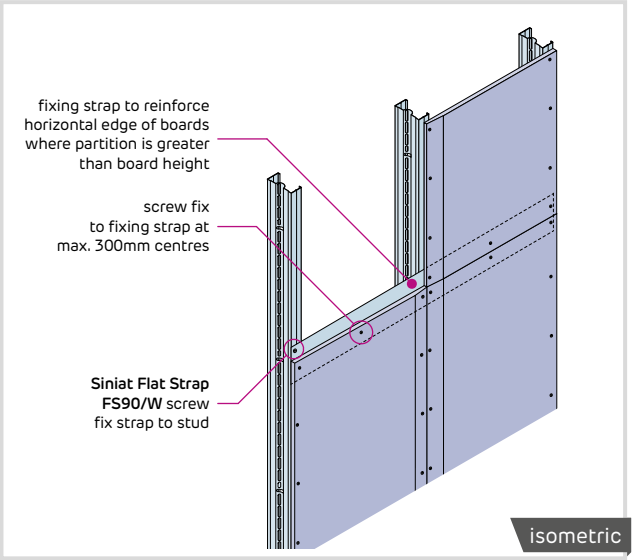
PT-AS-101M-Stud splice



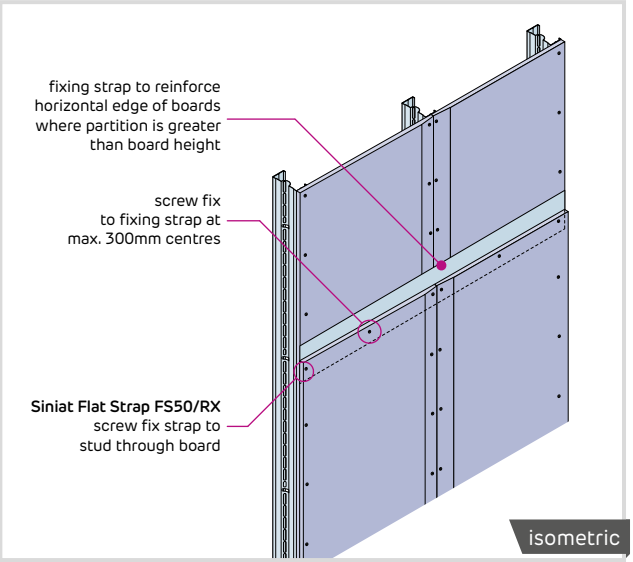
- Select compatible size (e.g. 70mm stud and 72mm track) Siniat Acoustic Stud, Siniat C Stud and Siniat U Track framing elements to suit system performance.
- Studs abutting structure (starter studs) to be Siniat C Stud, fixed with web flat to structure using appropriate fixings at maximum 600mm centres and fixed to head and track with appropriate Siniat Drywall Screws (see screw selector guide, annex d: screw selection guide).
- All Siniat C and Acoustic Studs to be 5mm shorter than floor to ceiling height or to suit deflection.
- Intermediate studs to be Siniat Acoustic Studs, facing in same direction, to be friction fitted to allow for adjustment during boarding.
- Siniat Studs to be at centres required to achieve performance and at a maximum of 600mm centres
- Where wall height exceeds available Siniat Stud length splice two lengths together ensuring overlap of 600mm for heights below 4m and 1000mm for heights above 4m. (AS70Rx and AS90Rx only. For AS146/Rx contact Technical Services.)

Boarding

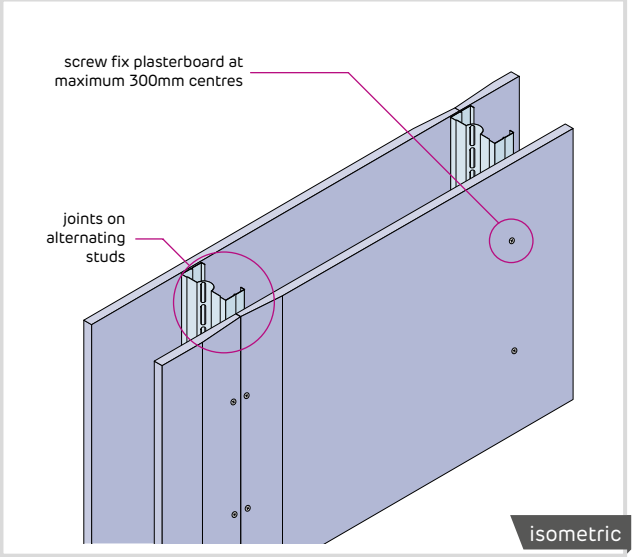
PT-AS-201M-Horizontal joint reinforcement, single layer



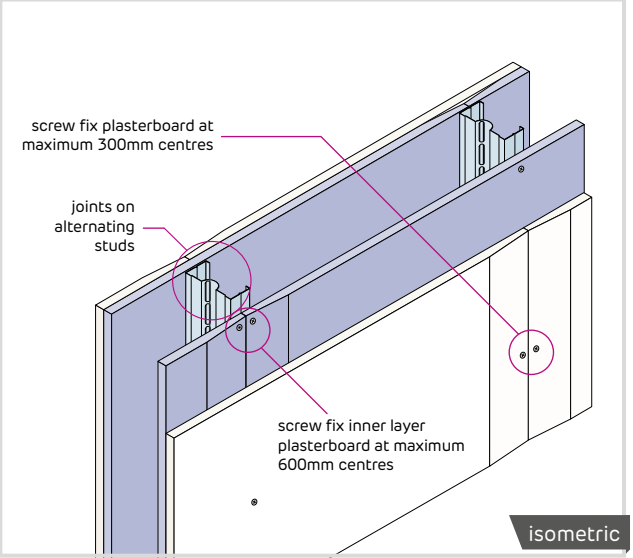
PT-AS-202M-Horizontal joint reinforcement, double layer



PT-AS-203M-Board fixing – single layer



PT-AS-204M-Board fixing – double layer

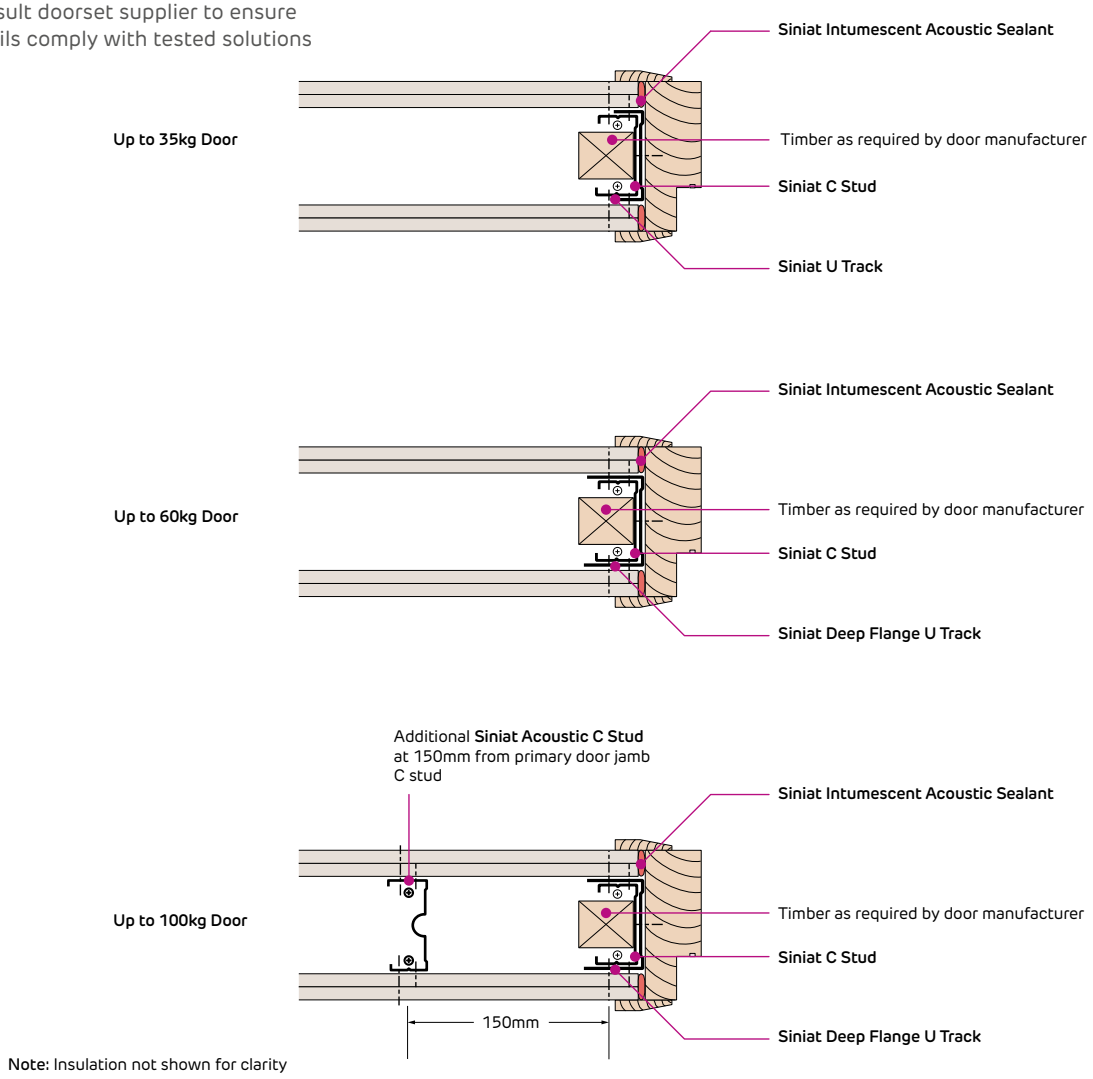


- Siniat Acoustic Stud partition system is suitable for single, double and multiple layer boarding.
- Stagger all horizontal and vertical board joints between layers a minimum of 300mm.
- Stagger all horizontal and vertical board joints on opposing sides of the partition.

Openings

PT-AS-401P- Door frames – 35 to 100kg

Consult doorset supplier to ensure details comply with tested solutions



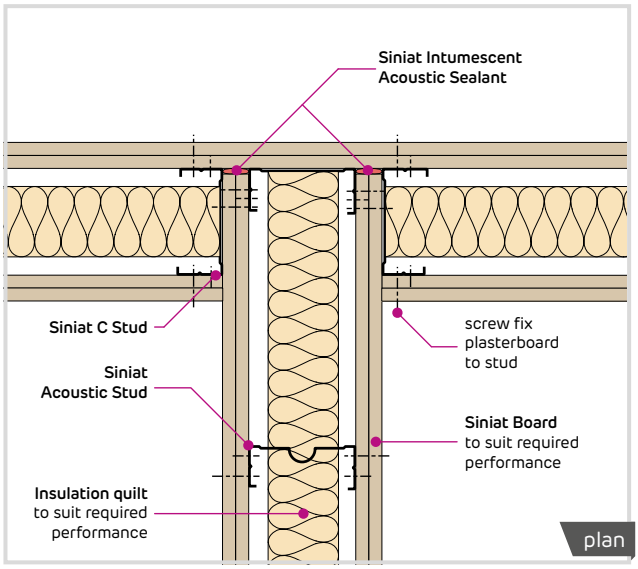
Note: Insulation not shown for clarity

plan

- Form openings following guidance in Construction Detail Drawings to suit door weights.
- Siniat C Studs to be used as jambs at openings to provide flat web for fixing.

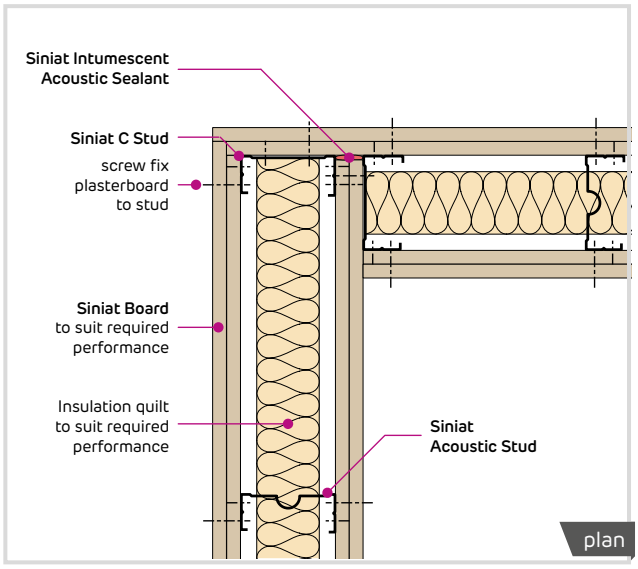
Corners and junctions

PT-AS-501P- Acoustic T-junction, double layer



- Siniat C Studs to be used at corners and junctions to provide flat web for fixing.

PT-AS-502P-Corner – double layer



- See Construction Details Drawings for further guidance on arrangement and fixing.

Curved partitions

- Siniat Acoustic Studs are not suitable for use in curved partitions.

system guidance

Siniat twin frame **partition system**

Separating walls and divisions between noisy or noise sensitive rooms requires very high levels of sound insulation. The Siniat Twin Frame metal system is a dual layer C or I Stud Partition used where the highest fire and acoustic performance is required.

Siniat Twin Frame Partitions are constructed from two metal frames in parallel, braced together with Siniat Acoustic V Brace when using C Studs, and boarded on the external sides only. Varying cavity size options help optimise acoustic insulation and provide a service cavity. An unbraced option using Siniat I studs is also possible.

The Siniat Twin Frame system is a lightweight, flexible option compared to traditional masonry separating walls. Refer to the System Performance Tables on pages 7 to 29 for full performance details.

Where to use:

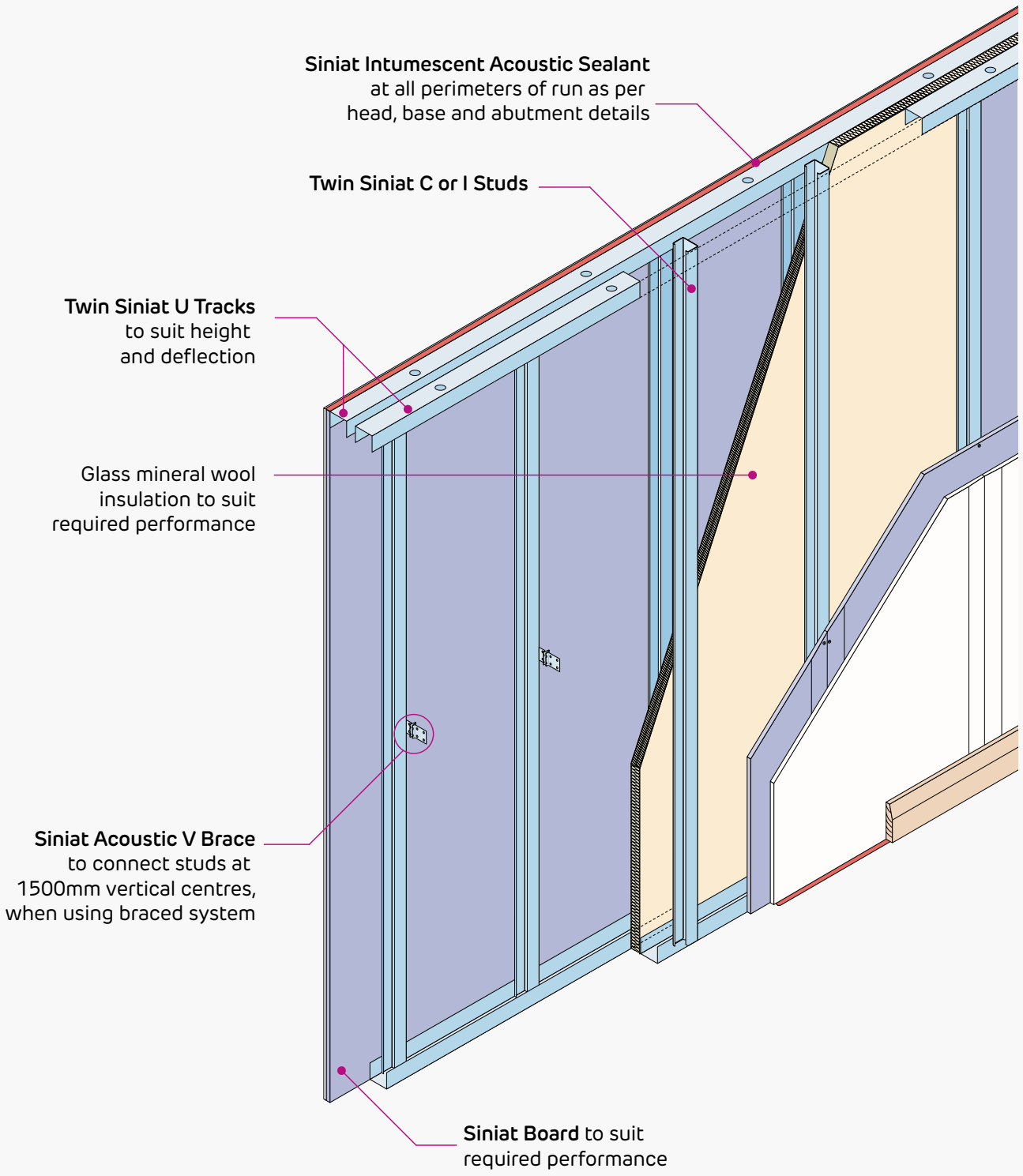
- Siniat Twin Frame systems are suitable for creating internal dividing walls in both domestic and commercial applications with increased performance and / or height requirements.
- The highest performing Siniat Twin Frame partitions are commonly used in cinemas, theatres and schools.

Benefits from all key features as detailed for Siniat C Stud, plus:

Features	Benefits
Cavity space between the two frames	Provides high levels of acoustic, thermal and fire performance
Varying cavity size	Optimisable for obstacles in the path of the partition
	Higher partition heights
Increased height capabilities	Enables use in large commercial spaces

Version: **2.1.0**
Published: **April 2023**

Technical services
technical@siniat@.co.uk


Siniat Intumescent Acoustic Sealant at all perimeters of run as per head, base and abutment details
Twin Siniat C or I Studs
Twin Siniat U Tracks to suit height and deflection
Glass mineral wool insulation to suit required performance
Siniat Acoustic V Brace to connect studs at 1500mm vertical centres, when using braced system
Siniat Board to suit required performance

system components

boards

All Siniat Board
Provides wall surface suitable for finishing.

See System performance tables, page 7 to 29

Siniat U Track
Metal profile for head and base frame elements.

UT52/RX/Y, UT62/RX, UT72/RX, UT92/RX, UT148/RX

Siniat Acoustic V Brace
Acoustic frame bracing.

VBRACE

Siniat Fixing Channel
Provide support for plasterboard joints and fixtures.

MFIX

frame

Siniat C Stud
Metal profile for vertical frame elements.

CS50/RX, CS60/RX, CS70/RX, CS90/RX, CS146/RX, CS90/W, CS70/Y, CS90/Y, CS146/Y

Siniat I Stud
Alternative metal profile for vertical frame elements.

IS50/RX, IS60/B, IS60/B, IS70/B, IS90/B

Siniat U Track Deep
Used for partitions with heights exceeding 4.2m. and with deflection heads.

UDT52/P, UDT62/P, UDT72/P, UDT92/P, UDT148/P

Siniat U Track Extra Deep
Used for partitions with heights exceeding 7.2m and with deflection heads.

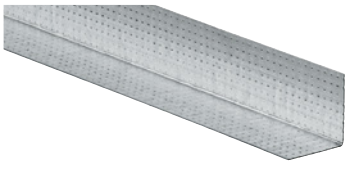
UXT72/B, UXT92/W, UXT148/W

Siniat Acoustic V Brace 90
Acoustic frame bracing for connecting at 90°.

VBRACE90

Siniat Resilient Tape
Provides acoustic isolation between components.

RAFT50



Siniat Metal Angle
Multi-purpose galvanised metal section..

MFC2525, MFC2550, MFC2330

Siniat Flat Strap
Provide support for plasterboard joints and fixtures..

FS50/RX, FS90/W

Siniat Flex Track Deep Flange
Steel track for curved partitions..

DFLEX/B

Siniat Patress Bracket
For attaching pattressing to
Siniat partition or framed lining systems.

MFPB/RX

fix

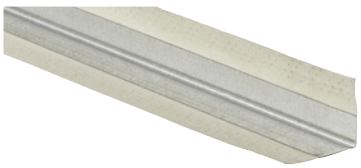
Siniat Drywall Screws (as appropriate)
For mechanical fixing of boards to
Siniat Shallow Wall Channel.

See annex d: screw selection guide

insulation

Glass Mineral Wool Insulation
To improve acoustic performance

finishing



Siniat Corner and Edge beads
Corner and edge reinforcement.

Siniat Joint Tape
Joint reinforcement in conjunction with
Siniat Jointing Compounds.

Siniat Foil Roll Intumescent Acoustic Sealant
For use as an acoustic sealant, resilient adhesive, decorators caulk and as fire resisting intumescent mastic

Siniat Compounds
To finish joints between boards and bed corner beads prior to decorating. Ensures system performance.

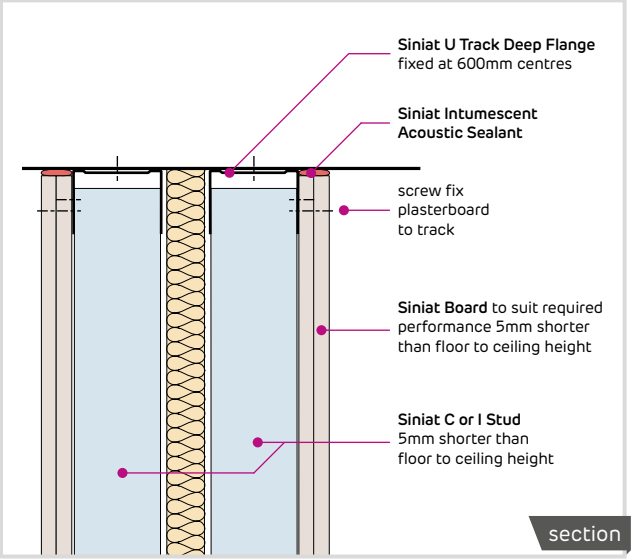
See annex b: product reference

Siniat Sealer
To seal plasterboard prior to decoration.

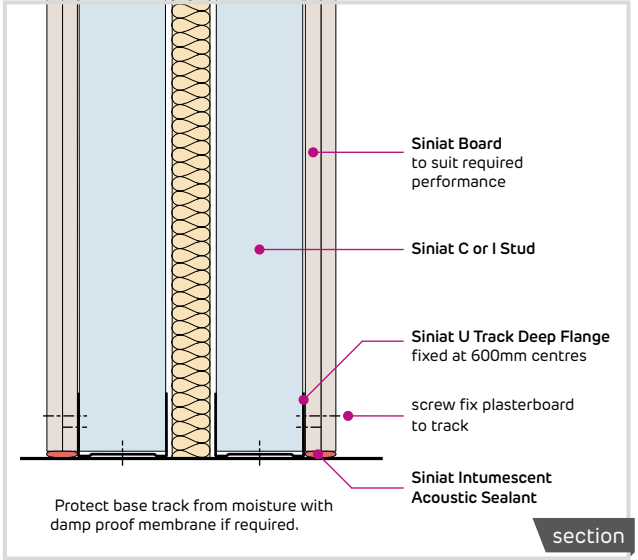
system guidance

Frame

PT-CT-101S-Head – no deflection

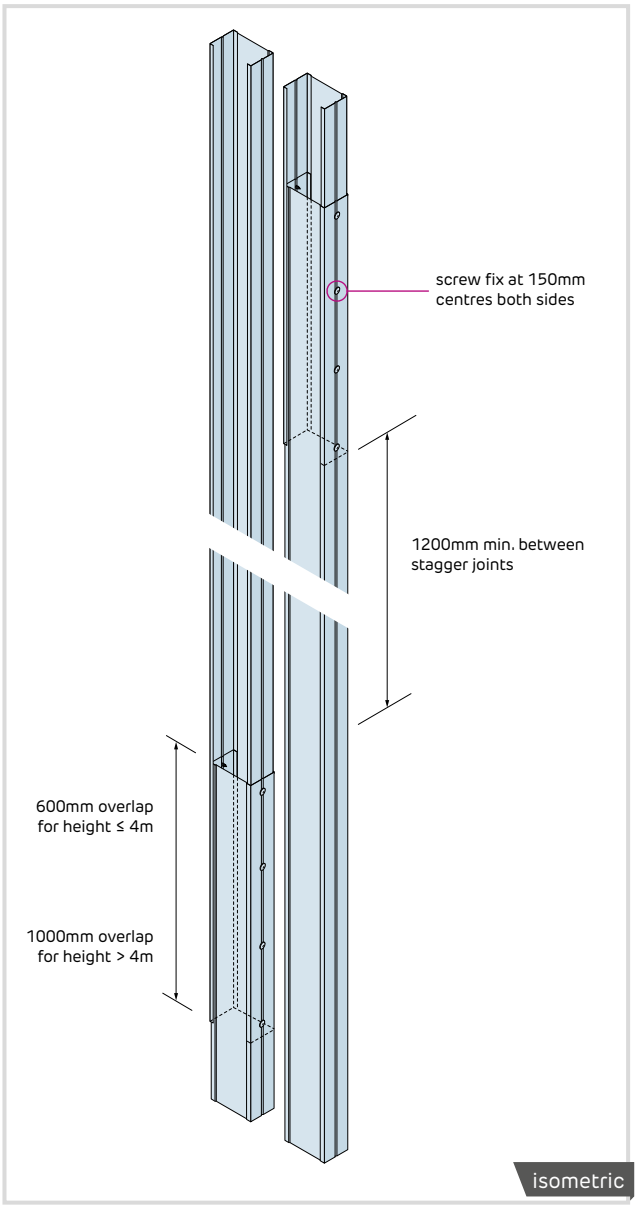


PT-CT-102S-Base

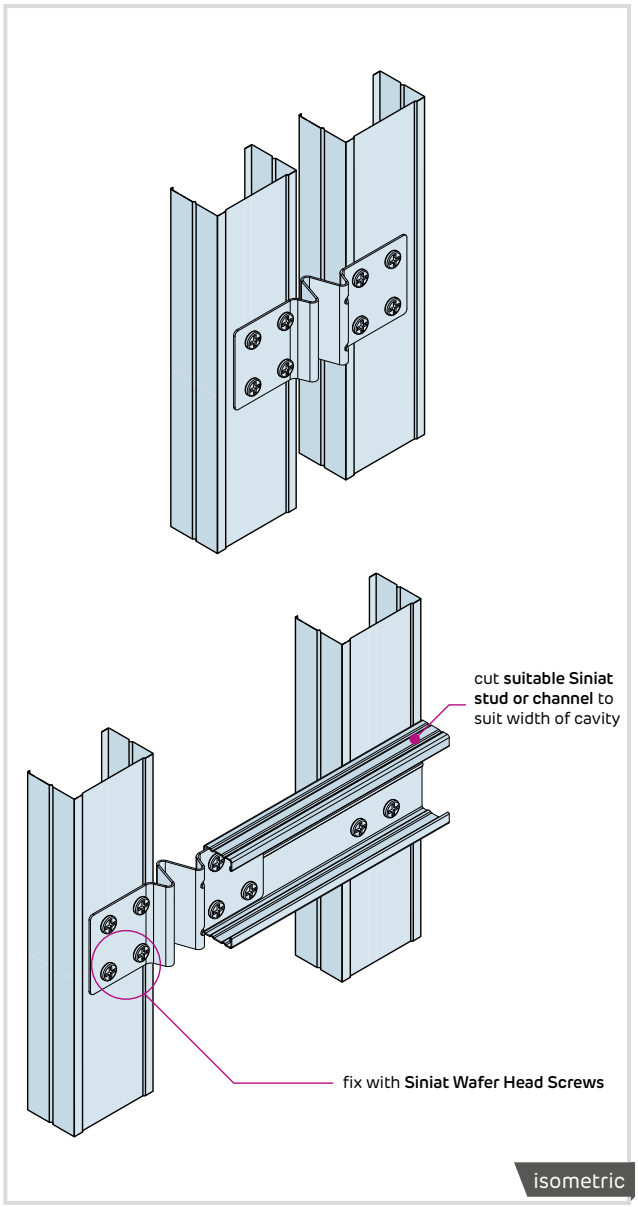


- Select compatible size (e.g. 50mm stud and 52mm track) Siniat C or I Stud and Siniat U Track framing elements to suit system performance.
- Siniat U Track deep and Extra deep to be used where deflection allowance is required (see page 56). Siniat U Track Deep to be used for heights greater than 4.2m or Extra Deep Flange for heights greater than 7.2m and where deflection allowance is required.
- Siniat Twin Frame partition to be constructed using two parallel track and stud frames braced together (when using C Studs) with Siniat Acoustic V Brace at 1500mm vertical centres, mechanically fixed to both studs with four appropriate Siniat Drywall screws (see annex d: screw selection guide).
- Separate parallel frames as required by system performance. Where frame separation is wider than Siniat Acoustic V Brace extend with additional length of suitable Siniat stud or channel.
- C Studs abutting structure to be fixed with web flat to structure using appropriate fixings at maximum 600mm centres and fixed to head and track with appropriate Siniat Drywall Screws (see annex d: screw selection guide).
- Siniat U Track to be fixed flat to structure using appropriate fixings at maximum 600mm centres.
- Protect base track from moisture with damp proof membrane when situated on newly laid concrete floors.
- All Siniat Studs to be 5mm shorter than floor to ceiling height or as dictated by the deflection allowance (see page 56).
- Intermediate Siniat Studs, facing in same direction, to be friction fitted to allow for adjustment during boarding.
- Siniat Studs to be at centres required to achieve performance and at a maximum of 600mm centres.
- Where wall height exceeds available Siniat C Stud length splice two lengths together ensuring overlap of 600mm for heights below 4m and 1000mm for heights above 4m.
- Acoustic break in slab for party walls may be required.

PT-CT-104M-C Stud splice

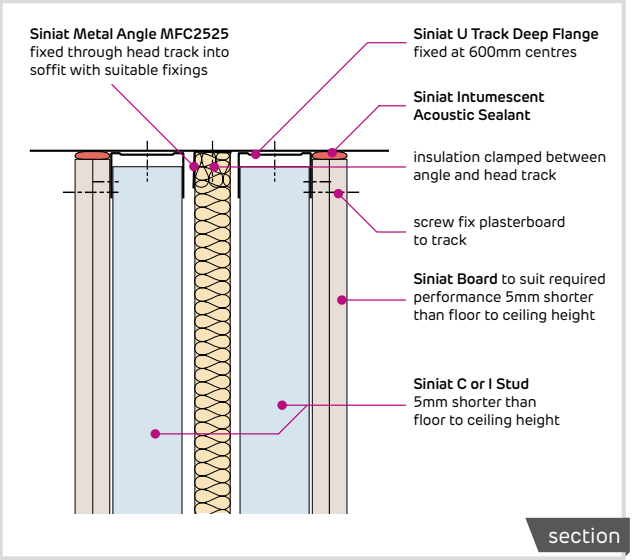


PT-CT-105M-V-brace fixing and extensions



Insulation

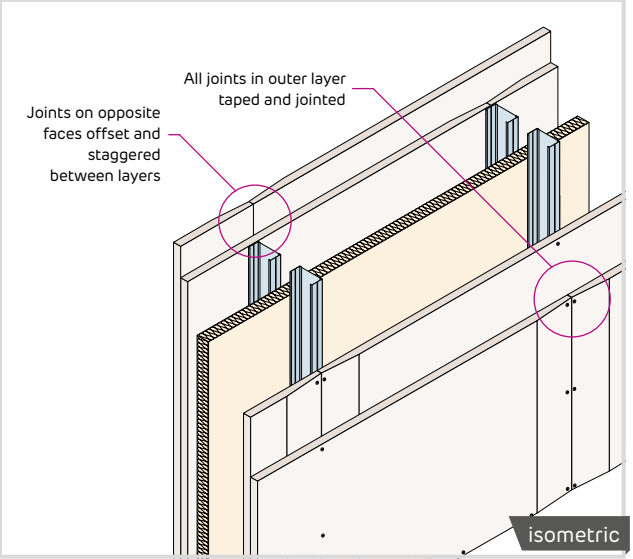
PT-CT-151M-Insulation fixing method



- Insulation, if required, to be of type and thickness to achieve performance and installed in a continuous layer between studs.
- Insulation to be clamped between Siniat Metal Angle fixed through to head track or soffit using suitable fixings. (Two fixings per 600mm strip, approx. 300mm apart.)

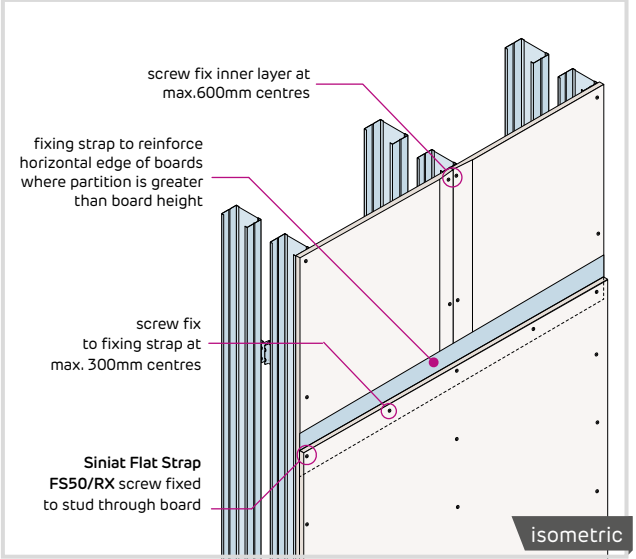
Boarding

PT-CT-201M-Board fixing – double layer



- Siniat Twin Frame partition system is suitable for single, double and multiple layer boarding.
- Select base layer(s) and finishing layer(s) Siniat Boards by consulting System Tables (pages 7 to 29) and for product specification (see annex b: product reference) to achieve required performance.
- Boards to be 5mm less than floor to ceiling height except in case of deflection requirement, see below.
- Strips of board 300mm wide or less to be avoided by stud location rearrangement.

PT-CT-202M-Horizontal joint reinforcement



- Boards to be mechanically fixed to studs at 300mm centres using appropriate Siniat Drywall Screws (see annex d: screw selection guide).
- Base layers of boarding may be temporarily fixed at 600mm centres providing final layer is fixed through to stud at 300mm centres.
- Board edges to be centred over studs.
- Stagger all horizontal and vertical board joints between layers by a minimum of 300mm.
- Stagger all horizontal and vertical board joints on opposing sides of partition.

Over-height single layer boarding:

- Where partition height exceeds board height fix boards to continuous band of Siniat Flat Strap FS90/W to be installed behind all horizontal joints to maintain fire integrity.

Over-height multiple layer boarding:

- Where partition height exceeds board height for double or multiple layer boarding fix outer layer of boards to continuous band of Siniat Flat Strap FS50/RX to be installed behind outer horizontal joints between inner and outer layer of board.

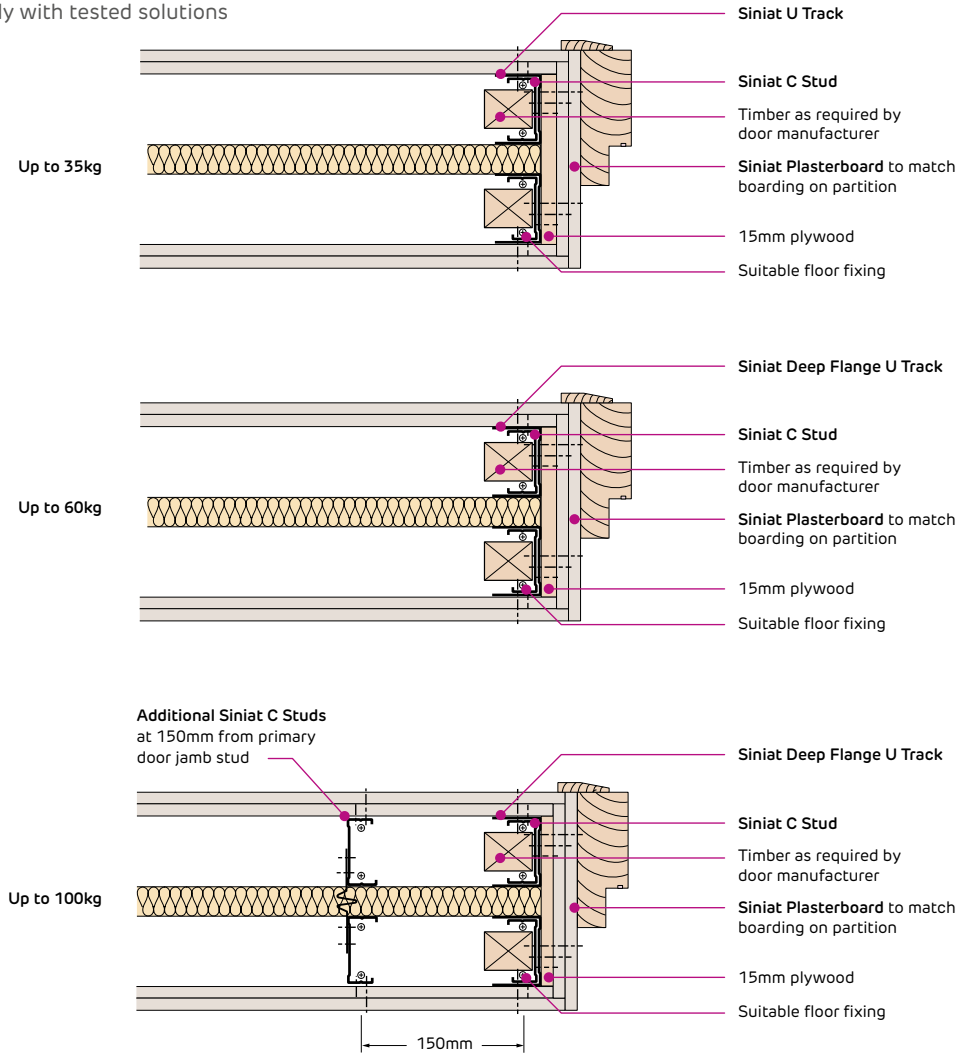
Movement control joints

- Form movement control joints in uninterrupted partition runs at maximum 10m intervals in the partition run.
- Form movement control joints where the partition crosses a structural movement joint.

Openings

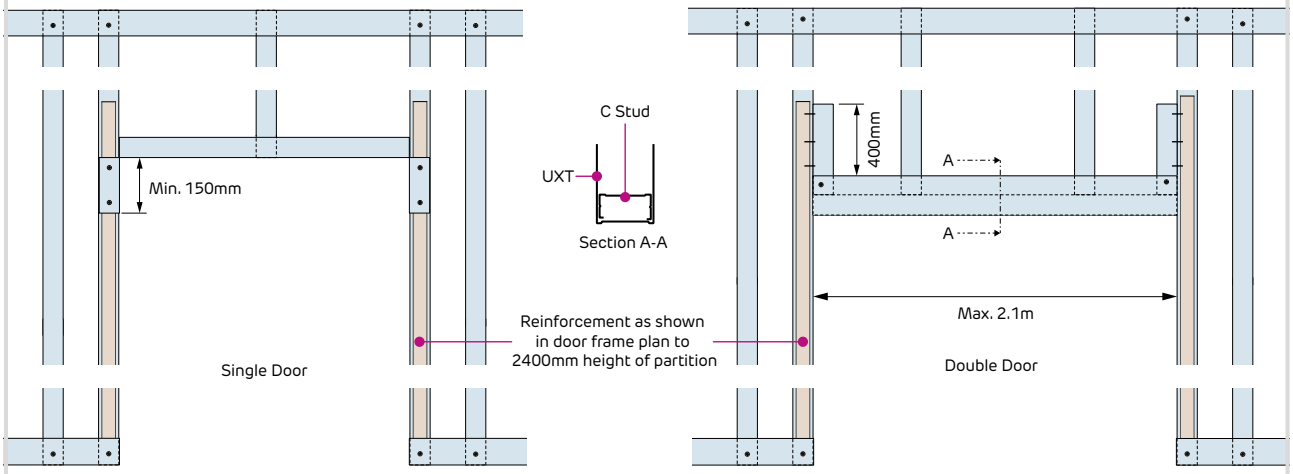
PT-CT-401P-Door frames – 35kg to 100kg door loads

Consult doorset supplier to ensure details comply with tested solutions



plan

PT-CT-403E-Single and double door frames

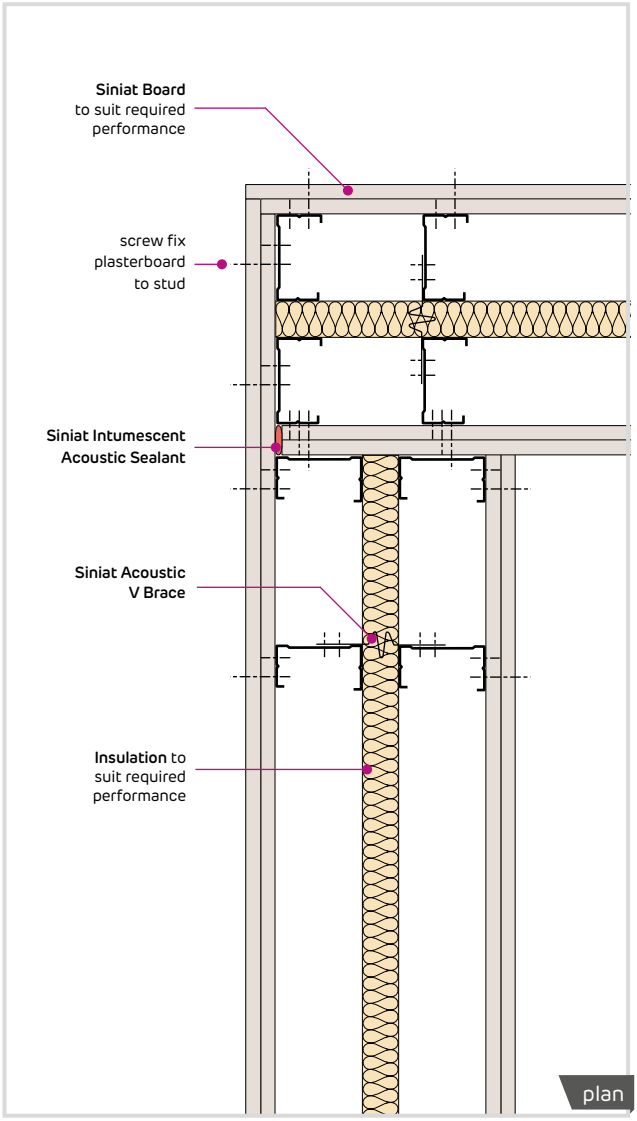


elevation

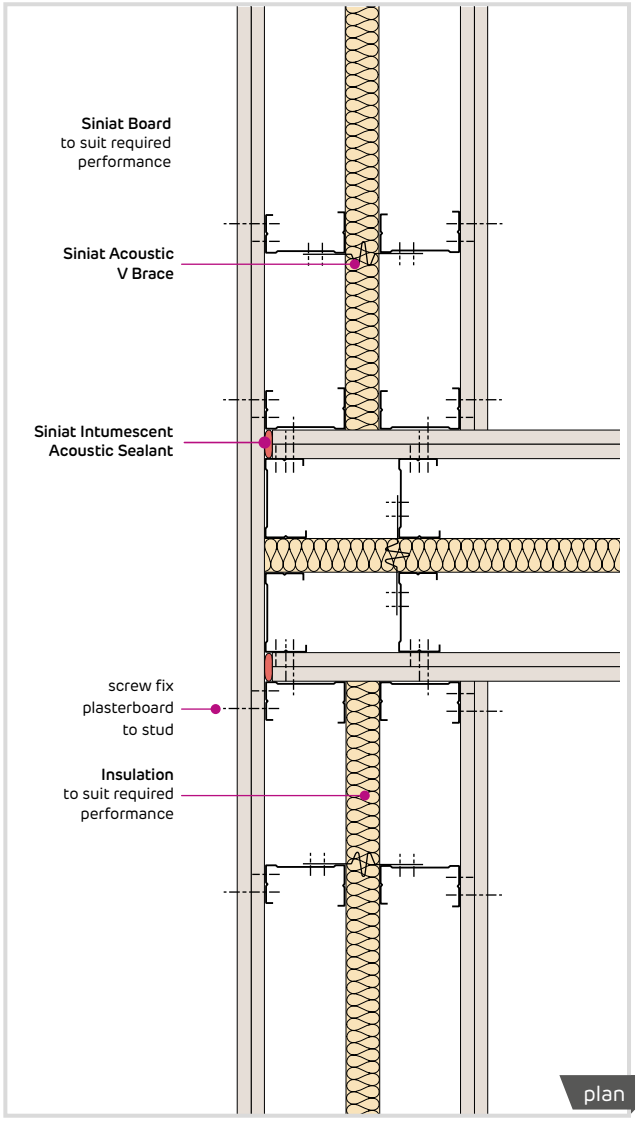
- Form openings following guidance in Construction Detail Drawings to suit door weights.
- Reinforce head-to-jamb junction 150mm down each jamb stud by cutting and folding head track.
- Reinforce jamb studs with timber as described in Construction Detail Drawings.
- Jamb studs to be fixed to track with appropriate Siniat Drywall Screws (see annex d: screw selection guide).
- Consult doorset manufacturer for any additional requirements to allow the installation of the doorset.

Corners and junctions

PT-CT-501P-Corner detail, double layer

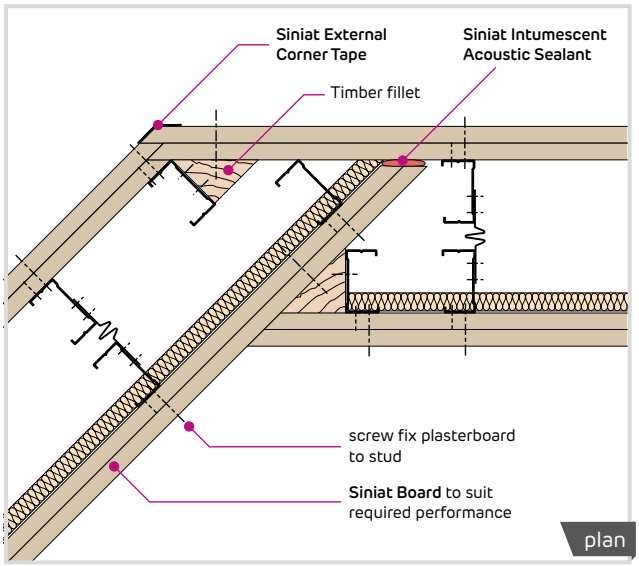


PT-CT-502P-Acoustic T-junctions, double layer

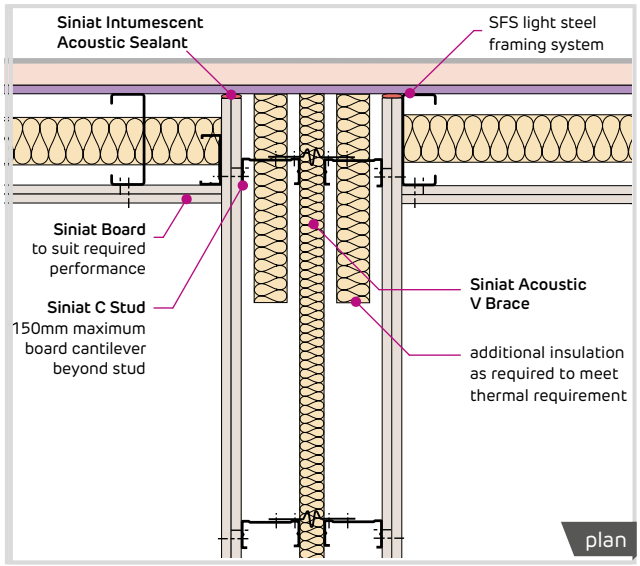


Corners and junctions continued

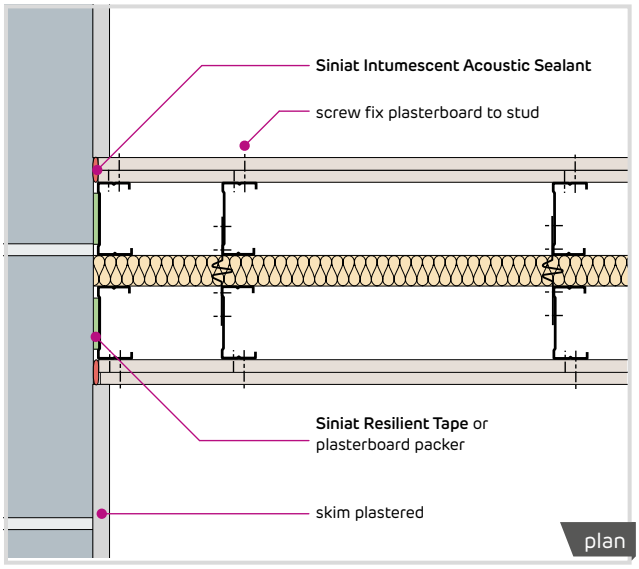
PT-CT-503P-Splayed corners



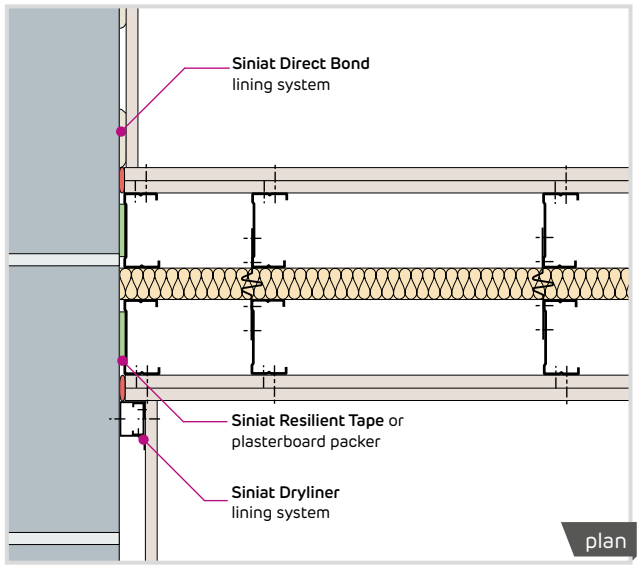
PT-CT-507P-Junction with external SFS wall, acoustic rated



PT-CT-505P-Junction with Masonry – Plastered



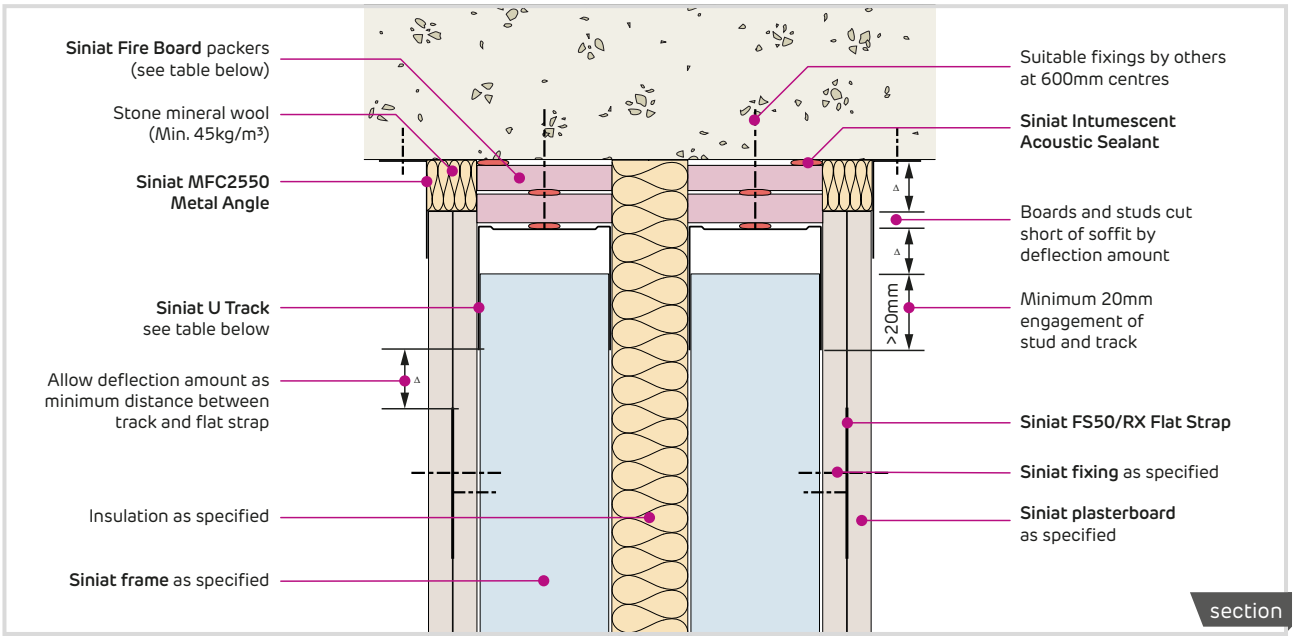
PT-CT-506P-Junction with Masonry – Dryliner & Direct Bond



- Abutting partitions to coincide with studs, install additional intermediate 'pick-up' stud if required.
- Connect studs through plasterboards at corners and junctions at 600mm vertical centres using appropriate Siniat Drywall Screws.
- See Construction Details Drawings for further guidance on arrangement and fixing.

Head deflection

EN Deflection head for up to 120 mins rated partitions

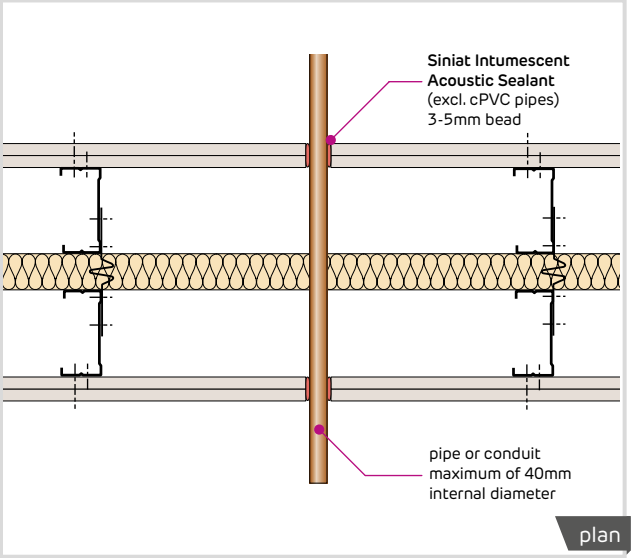


Deflection required	Packer for all fire ratings	Track for all fire ratings	30 - 120 mins
6-10mm	15mm Siniat Fire Board	Siniat U Track (UT)	Siniat MFC2550 and Stone Mineral Wool (Min. 45kg/m³)
11-20mm	2x 12.5mm Siniat Fire Board	Siniat Deep Flange U Track (UDT)	Siniat MFC2550 and Stone Mineral Wool (Min. 45kg/m³)
21-25mm	2x 15mm Siniat Fire Board	Siniat Deep Flange U Track (UDT)	Siniat MFC2550 and Stone Mineral Wool (Min. 45kg/m³)
26-30mm	3x 12.5mm Siniat Fire Board	Siniat Deep Flange U Track (UDT)	Siniat MFC2550 and Stone Mineral Wool (Min. 45kg/m³)
31-40mm	3x 15mm Siniat Fire Board	Siniat Extra Deep Flange U Track (UXT)	Siniat MFC2550 and Stone Mineral Wool (Min. 45kg/m³)

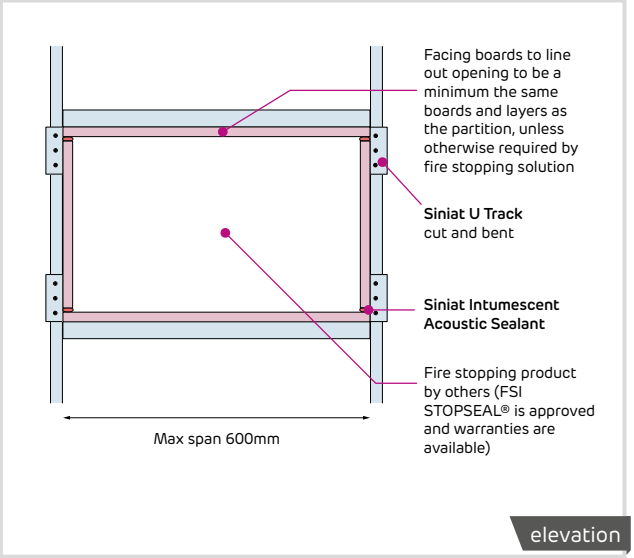
- See Construction Detail Drawings and Tables for full details. Contact Siniat Technical Services for further information.
- Continuity of head packer to be maintained.
- No mechanical connection to be made between stud and head track.
- All air paths to be sealed with Siniat Intumescent Acoustic Sealant.
- Siniat Studs to be cut short of track by deflection amount.
- Siniat Studs and Tracks to overlap by minimum 30mm.
- Siniat Boards to be cut short of partition height by deflection amount.
- Siniat Boards to overlap packer by minimum of 5mm.

Penetrations

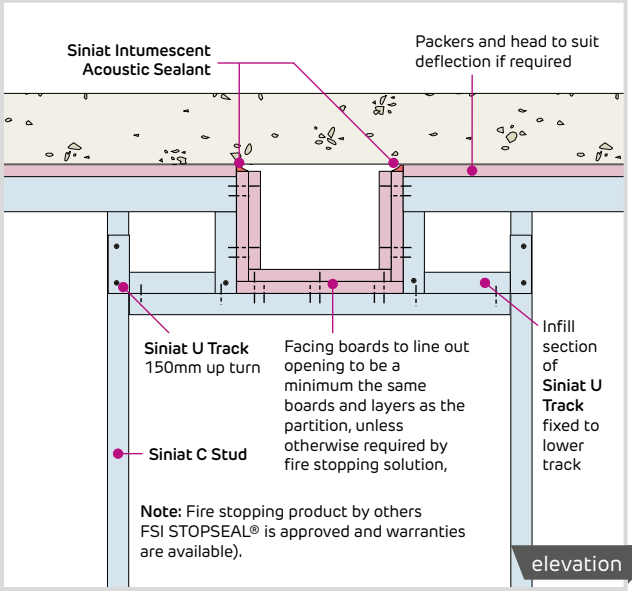
PT-CT-701P-Small diameter pipe penetration



PT-CS-702E-Service penetration detail



PT-CS-703M-Cable tray penetration at soffit



- M&E runs and other penetrating services to be pre-planned to minimise or eliminate penetrations through rated partitions.
- Penetrations should not coincide with door jamb studs.
- Pipe penetrations of 40mm or less may be sealed with Siniat Intumescent Acoustic Sealant. (For cPVC pipes use Promat HPEx Sealant)
- Protect all electrical cables in cavity with conduit.
- Details shown are typical supporting constructions for proprietary fire-stopping products, seek further advice from fire-stopping product supplier.
- All dampers must be independently supported with no load to be taken by the partition. Consult damper manufacturer for tested details.

Fixtures

- Consult fixture details in Siniat C Stud Section (pages 33 to 34) for recommended fixture provision.

Finishing

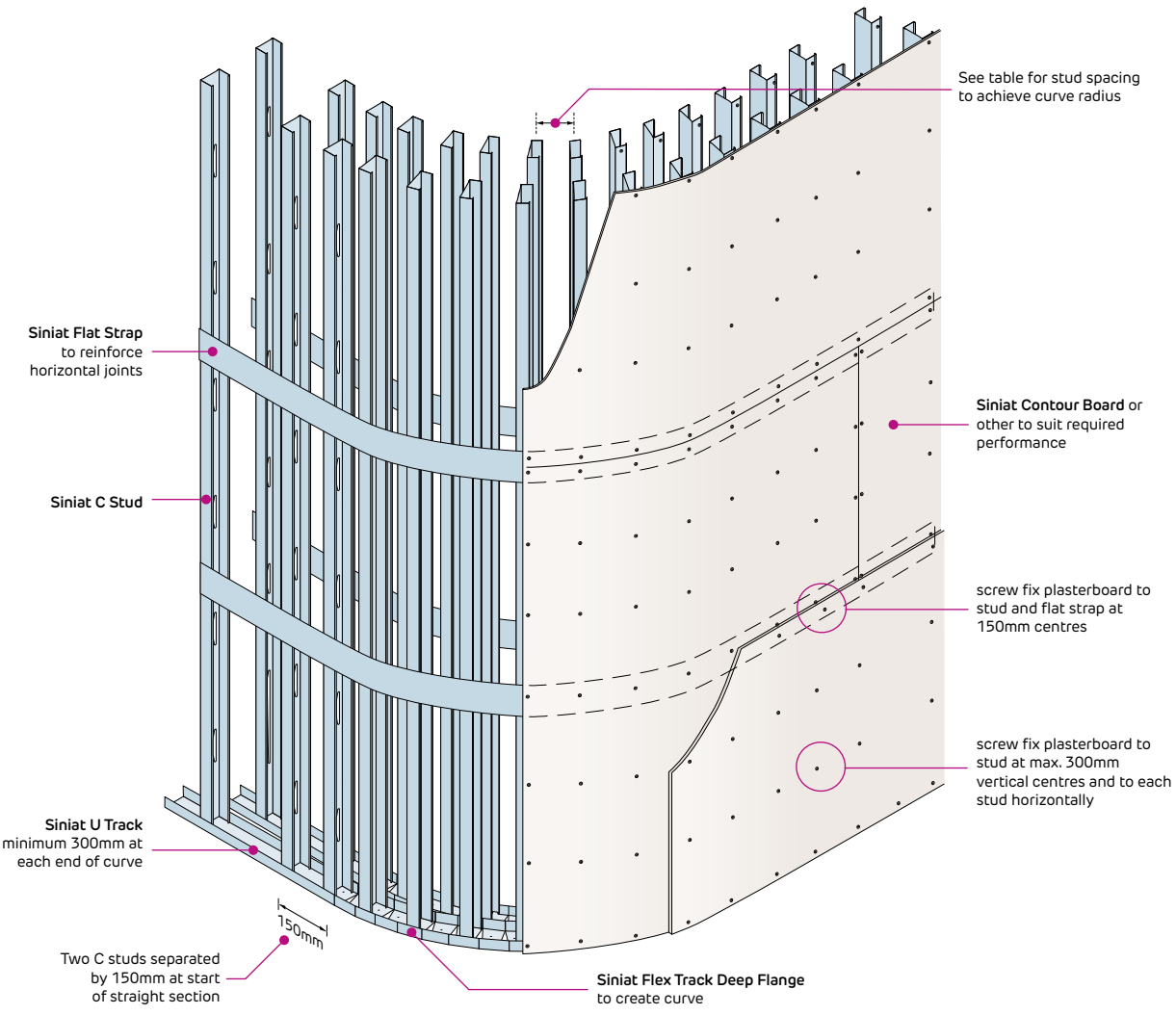
- All board joints to be taped, jointed or finished according to guidance see annex a1: taping and jointing to achieve system performances.
- Siniat Finish materials appropriate to board type to be used.

System continuity

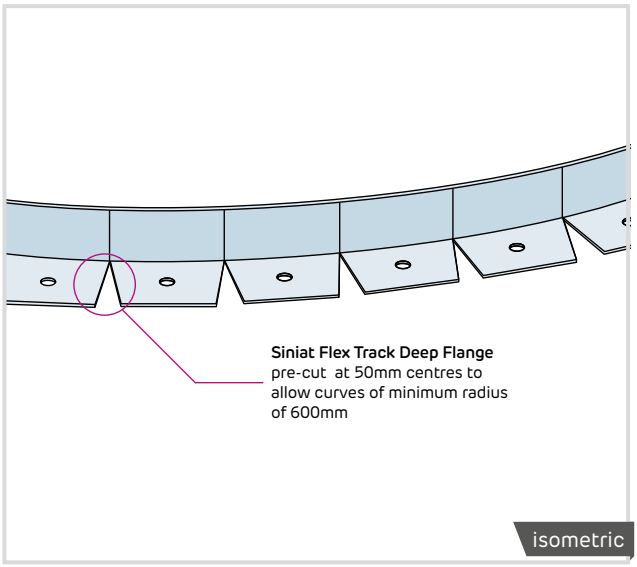
- Bead of Siniat Intumescent Acoustic Sealant to be applied to perimeter of all runs and in all other locations specified in Construction Detail Drawings.
- Siniat Intumescent Acoustic Sealant to seal all other acoustic or air paths to prevent fire/smoke spread and acoustic transmission.
- Full, imperforate system continuity to be maintained to achieve rated performances.

Curved partitions

PT-CT-901M-Curved partition

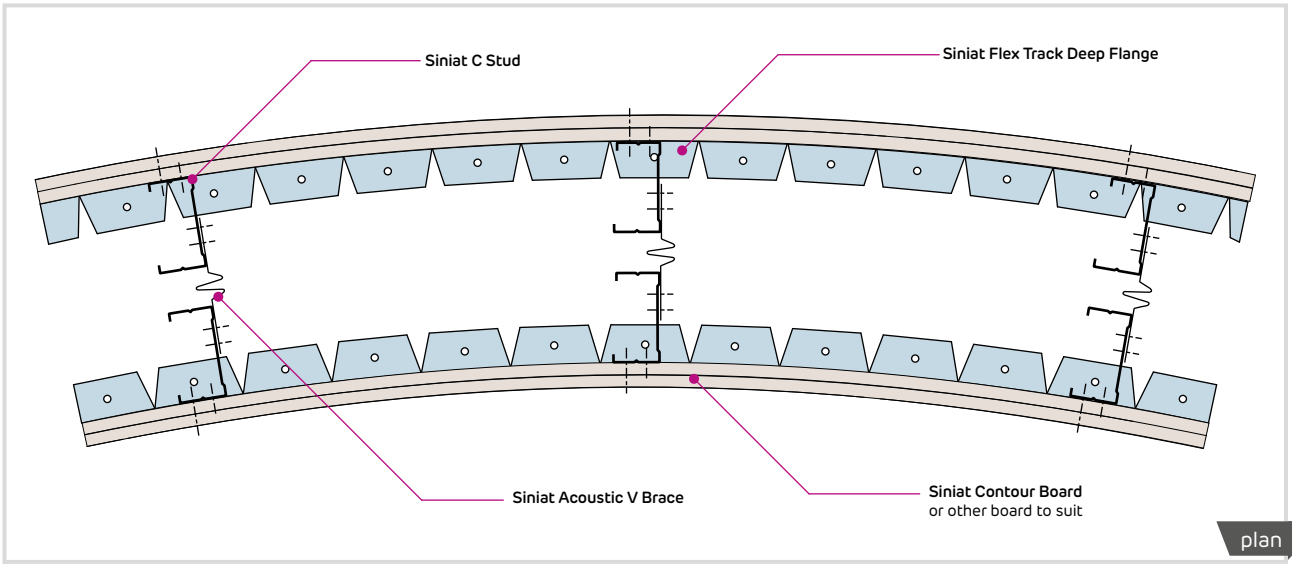


PT-CT-902M-Flex track component



- Boards to be installed horizontally.
- Fix boards to continuous band of Siniat Flat Strap FS90/W behind all horizontal joints
- For tight curving, slightly dampen the boards using a brush or roller. Install and dry immediately
- System performance may vary.

PT-CT-903P-Twin frame curved partition plan



	Maximum studs centres (mm)			
Radius (m)	6mm Siniat Contour Board	9.5mm Siniat Board	12.5mm Siniat Board	15mm Siniat Board
0.6 – 0.8	150 Wet	–	–	–
0.9 – 1.0	200 Dry	150 Wet	–	–
1.1 – 1.5	200 Dry	200 Wet	150 Wet	–
1.6 – 2.0	200 Dry	250 Wet	200 Wet	–
2.1 – 3.0	200 Dry	300 Wet	200 Wet	150 Wet
3.1 – 4.0	300 Dry	450 Wet	400 Wet	200 Wet
4.1 – 8.0	300 Dry	450 Wet	500 Wet	400 Wet
8.1 – 11.0	300 Dry	600 Dry	600 Dry	600 Wet
> 11.0	300 Dry	600 Dry	600 Dry	600 Dry

system guidance

Siniat resilient acoustic stud **partition system**

Siniat Resilient Acoustic Stud is a new acoustic innovation providing an alternative solution for party walls and corridor walls to meet Approved Document Part E of the Buildings Regulations.

The Siniat Resilient Acoustic Stud has an inbuilt acoustic absorbing material within a stud, which reduces airborne and impact sound from passing through dividing walls.

It is constructed using a frame of Siniat U Track at the head and base with the studs for vertical framing as per a single frame partition. Available in 70mm and 90mm widths.

Where to use:

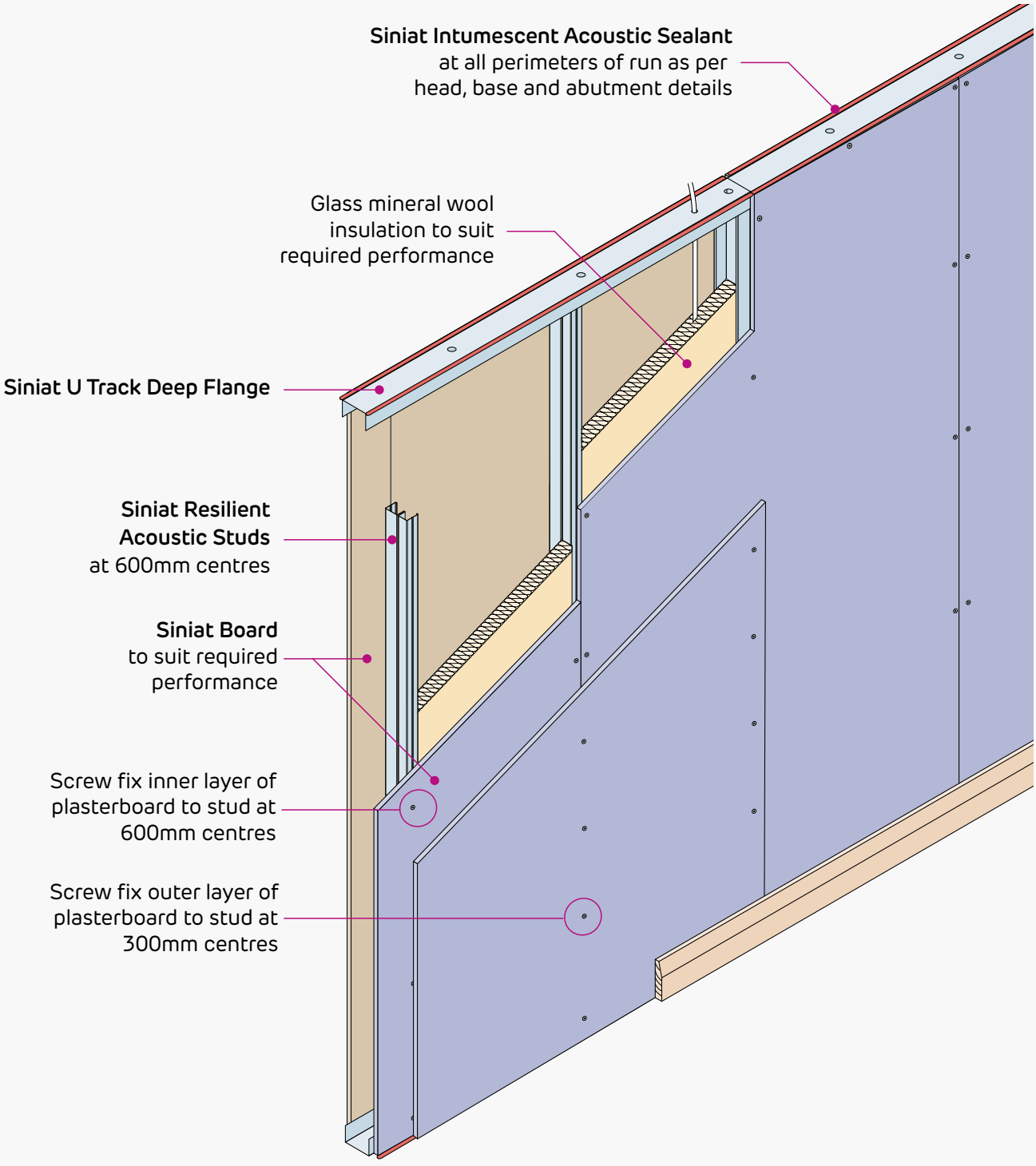
- Party walls and corridor walls in Hotels, Student accommodation, Care homes, Apartments and Change of use

Benefits from all key features as detailed for Siniat C Stud, plus:

Features	Benefits
A significantly thinner partition footprint	Greater gross internal area whilst providing high acoustic performance
Compatible with Siniat U Tracks	Only requires one change in component in a specification and on site
	Partition types can be mixed on site
Less system components required in comparison to a Twin Frame system and Resilient Bar system	Less components on-site and easier to install
	Proven by BRE to be up to 50% quicker to build

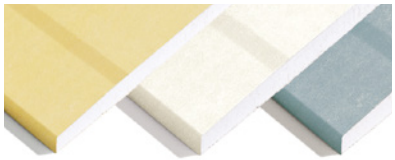
Version: **2.1.0**
Published: **April 2023**

Technical services
technical@siniat@.co.uk


Siniat Intumescent Acoustic Sealant
at all perimeters of run as per
head, base and abutment details
Glass mineral wool
insulation to suit
required performance
Siniat U Track Deep Flange
Siniat Resilient
Acoustic Studs
at 600mm centres
Siniat Board
to suit required
performance
Screw fix inner layer of
plasterboard to stud at
600mm centres
Screw fix outer layer of
plasterboard to stud at
300mm centres

system components

boards



Siniat Boards
Universal / Megadeco / dB Boards.

See performance table, pages 5 to 29

frame

Siniat Resilient Acoustic Stud
A revolutionary acoustic stud that creates the narrowest, easiest and quickest way to build separating walls

RAS70/P , RAS90/P

Siniat U Track
Metal profile for head and base frame elements.

UT72/RX, UT92/RX

Siniat U Track Deep
Used for partitions with heights exceeding 4.2m and with deflection heads.

UDT72/P, UDT92/P

Siniat Metal Angle
Multi-purpose galvanised metal section.

MFC2525, MFC2550, MFC2330

Siniat Flat Strap
Provide support for plasterboard joints and fixtures.

FS50/RX, FS90/W

Siniat Patress Bracket
For attaching pattressing to Siniat partition or framed lining systems.

MFPB/RX

fix

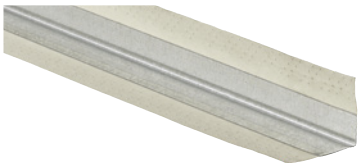
Siniat Drywall Screws (as appropriate)
For mechanical fixing of boards to Siniat Shallow Wall Channel.

See annex d: screw selection guide

insulation

Glass Mineral Wool Insulation
To improve acoustic performance

finishing



Siniat Corner and Edge beads
Corner and edge reinforcement.

Siniat Joint Tape
Joint reinforcement in conjunction with Siniat Jointing Compounds.

Siniat Foil Roll Intumescent Acoustic Sealant
For use as an acoustic sealant, resilient adhesive, decorators caulk and as fire resisting intumescent mastic

Siniat Compounds
To finish joints between boards and bed corner beads prior to decorating. Ensures system performance.

See annex b: product reference

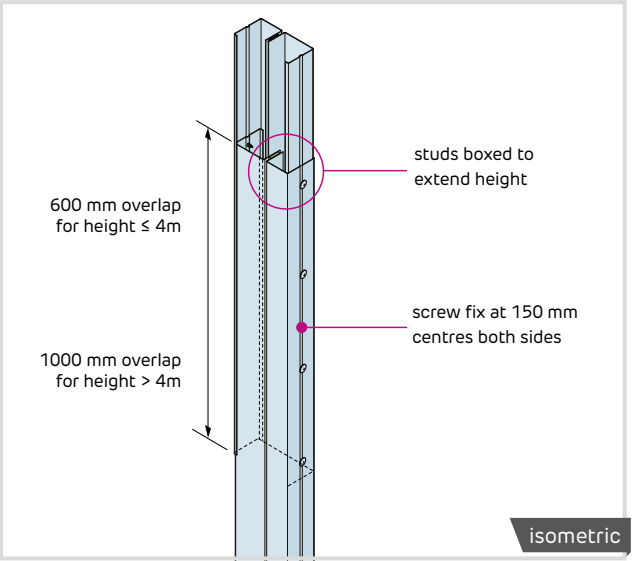
Siniat Sealer
To seal plasterboard prior to decoration.

system guidance

See guidance in Siniat C Stud section and additional considerations given below;

Frame

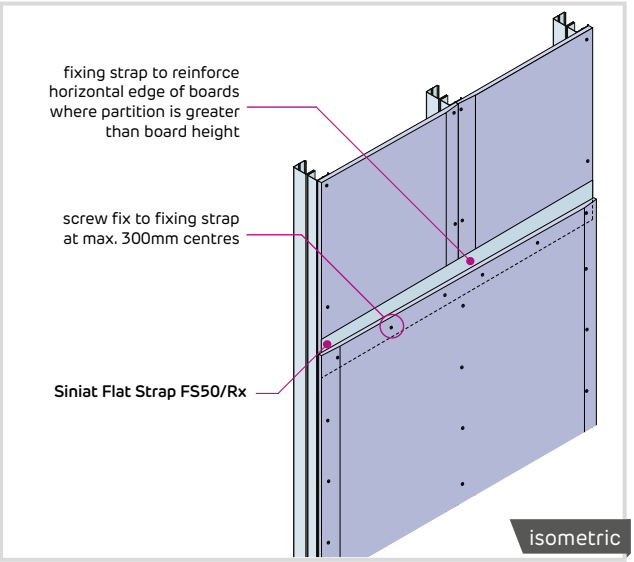
PT-RS-105M-Stud splice



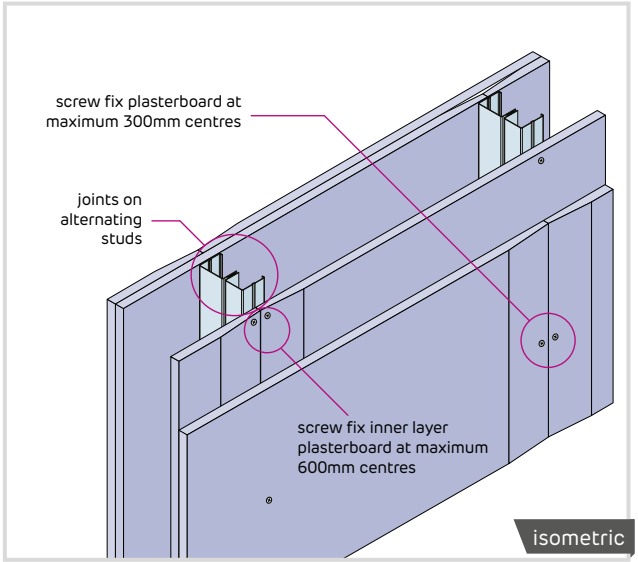
- Select compatible size (e.g. 70mm stud and 72mm track) Siniat Resilient Acoustic Stud, Siniat C Stud and Siniat U Track framing elements to suit system performance.
- Studs abutting structure (starter studs) to be Siniat Resilient Acoustic Stud, fixed with web flat to structure using appropriate fixings at maximum 600mm centres and fixed to head and track with appropriate Siniat Drywall Screws (see annex d: screw selection guide).
- Siniat Resilient Acoustic Studs to be 5mm shorter than floor to ceiling height or to suit deflection.
- Intermediate studs to be Siniat Resilient Acoustic Studs, facing in same direction, to be friction fitted to allow for adjustment during boarding.
- Siniat Studs to be at centres required to achieve performance and at a maximum of 600mm centres.
- Where wall height exceeds available Siniat Stud length splice two lengths together ensuring overlap of 600mm for heights below 4m and 1000mm for heights above 4m.

Boarding

PT-RS-202M-Horizontal-joint-reinforcement, double layer



PT-RS-204M-Board-fixing, double layer

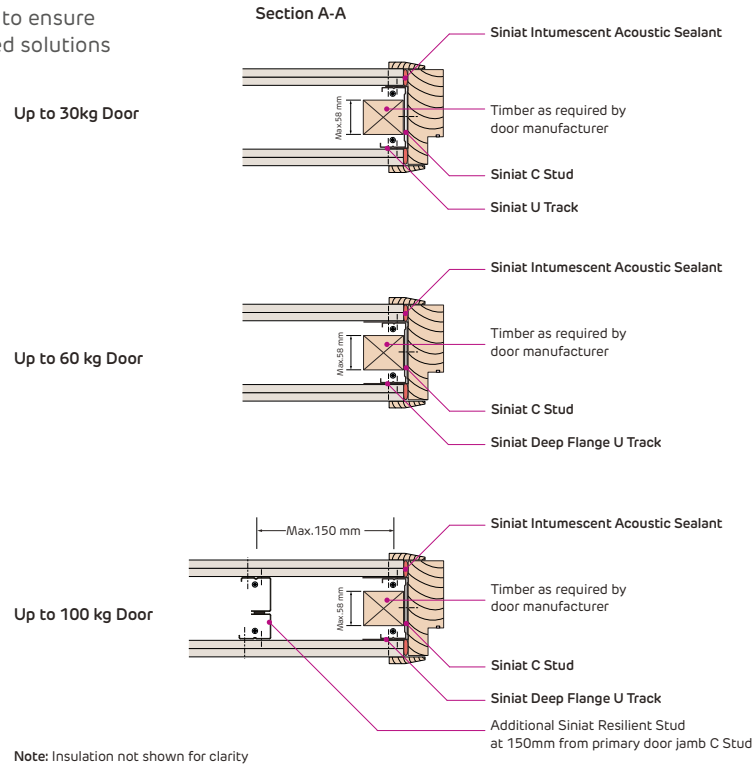


- Siniat Resilient Acoustic Stud partition system is tested with double boarding only; refer to performance tables on pages 7 to 29.
- Stagger all horizontal and vertical board joints between layers a minimum of 300mm.
- Stagger all horizontal and vertical board joints on opposing sides of the partition

Openings

PT-RS-402P-Door frames 30-100kg

Consult doorset supplier to ensure details comply with tested solutions



Note: Insulation not shown for clarity

plan

PT-RS-401M-Door frame Installation

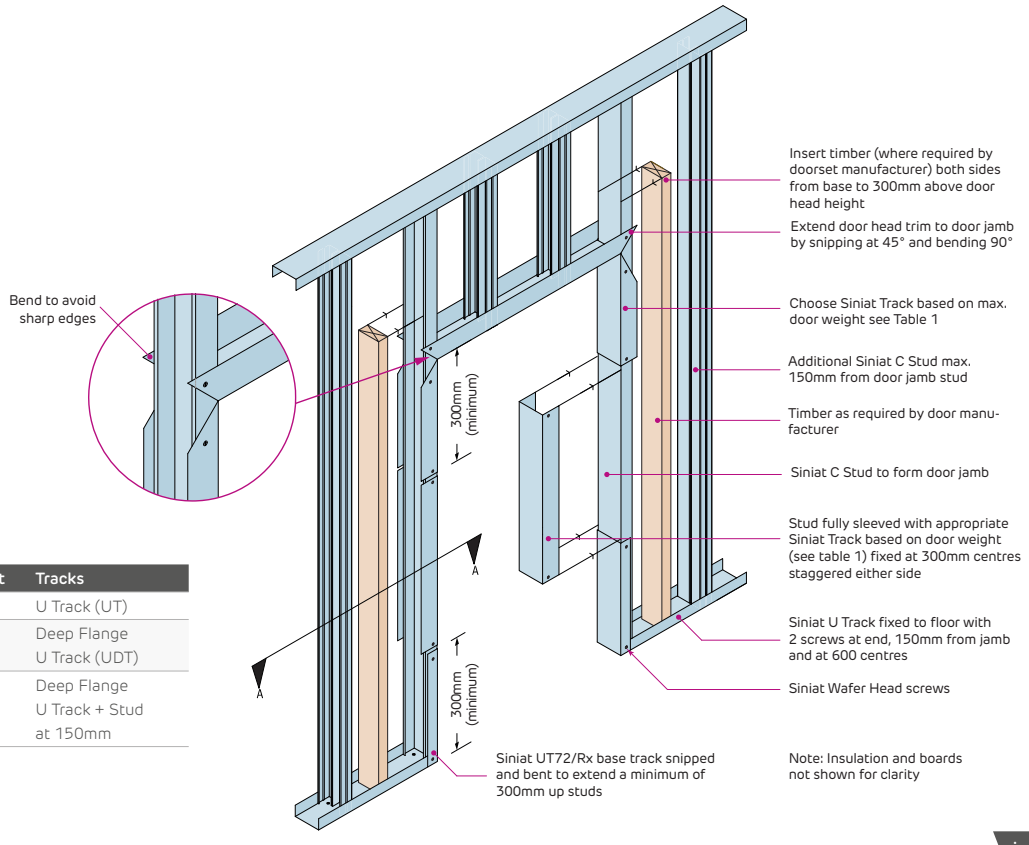


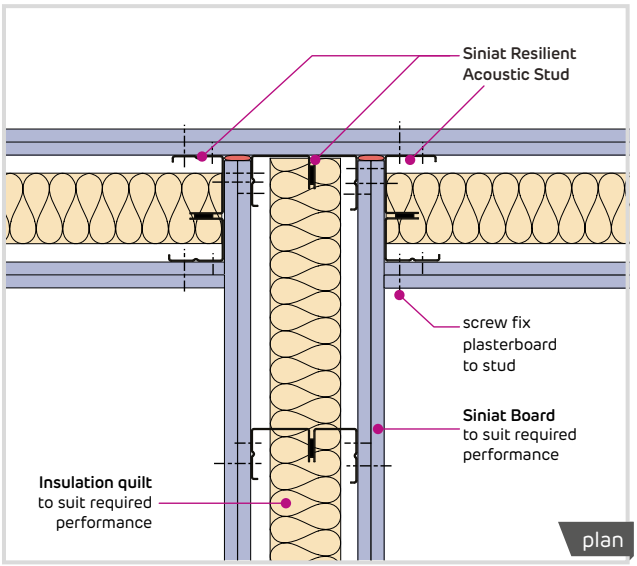
Table 1

Max Door Weight	Tracks
up to 35kg	U Track (UT)
up to 60kg	Deep Flange U Track (UDT)
up to 100kg	Deep Flange U Track + Stud at 150mm

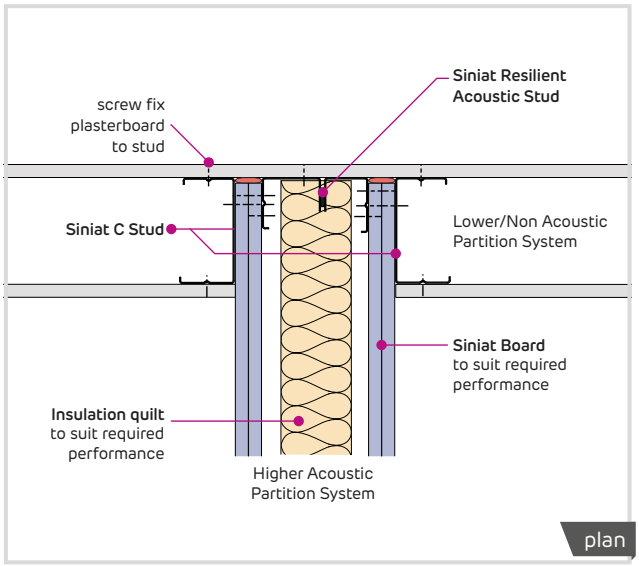
isometric

Corners and junctions

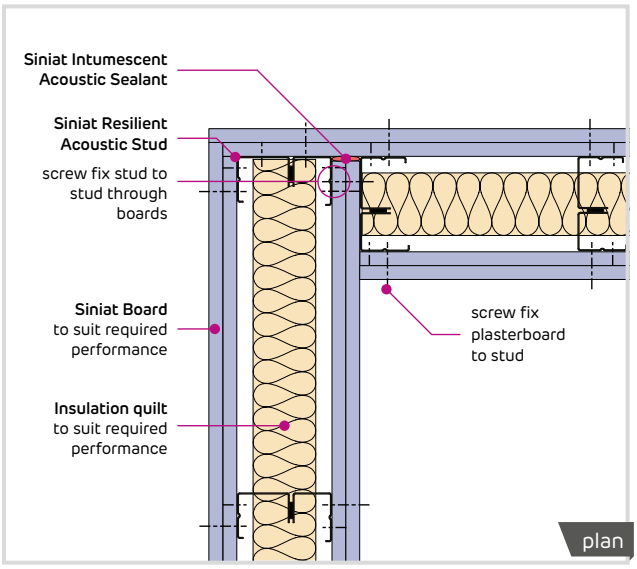
PT-RS-501P-Acoustic-T-junction, double layer



PT-RS-503P-Acoustic-T-junction



PT-RS-502P-Corner- double layer



- Siniat Resilient Acoustic Studs to be used at corners and junctions to provide flat web for fixing.
- Where two different partition systems meet the higher acoustic rated wall should intersect the lower rated wall in an Acoustic T junction.
- See Construction Details Drawings for further guidance on arrangement and fixing.

Heartlands Hospital
Birmingham

Sector: Healthcare
Project Value: £91.7m
Client: University Hospitals Birmingham NHS Foundation Trust
Architect: The Design Buro
Main Contractor: Kier
Sub Contractor: CG Reynolds
Siniat Innovations: Siniat Universal Board, Siniat Weather Defence™, Siniat dB Board and Siniat metals

GB orderline

For placing orders, delivery enquiries and local stockists etc.

0800 373 636 (select option 1)
orderline@siniat.co.uk

Customer support

0800 373 636 (select option 2)
customer.support@siniat.co.uk

Technical services

Advisory service.

01275 377 789
technical@siniat.co.uk

The Training Centre

For all drywall training needs from basic introduction to advanced skills and development.

0127 537 7789
training@siniat.co.uk

Etex Building Performance Limited
Marsh Lane, Easton-in-Gordano,
Bristol, BS20 0NE

+44 (0)1275 377 773
siniat.co.uk

CI/SfB | | Rf7 | |

0530-SIN V2.1.0/04/2023